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GOOD CULTIVATION depends on nothing so much as the supply of an *abundance of food.* And yet there are hundreds and thousands of cultivators who do not recognise this fact in their practice. They feed their horses and cows regularly, because it is undeniable that they have mouths and stomachs; and experience has demonstrated, that not to keep these sufficiently supplied amounts at last to starvation. But, because a plant has a thousand little concealed mouths, instead of one wide gaping one,—because it finds enough even in poor soils to keep it from actually starving to death, ignorant cultivators appear to consider that they deserve well of their trees and plants, if they barely keep their roots covered with earth. They make plantations in thin soil, or upon lands exhausted of all inorganic food by numberless croppings, and then wonder why they succeed so poorly in obtaining heavy products.

Too much, therefore, can never be written about manures. After all that has been said about them, they are yet but little understood; and there is not one person in ten thousand, among all those owning gardens in this country, who does not annually throw away, or neglect to make use of, some of the most valuable manures for trees and plants,—manures constantly within his reach, and yet entirely neglected.

We must therefore throw out a few seasonable hints, on the preparation and use of manures, which we hope may aid such of our readers as are anxious to feed their trees and plants in such a generous manner as to deserve a grateful return.

Among the first and best of wasted manures, constantly before our eyes in the autumn, are the *falling leaves* of all deciduous trees. When we remember that these leaves contain not only *all the substances* necessary to the growth of the plants from which they fall; but those substances in the proportions actually needed for new growth, it is surprising that we can ever allow a barrowful to be lost. The whole riddle of the wonderful growth of giant forests, on land not naturally rich, and to which nature scarce allows a particle of what is commonly called manure, lies hidden in the deep beds of fallen leaves which accumulate over the roots, and, by their gradual decay, furnish a plentiful supply of the most suitable food for the trees above them. Gather and take away from the trees in a wood this annual coat of leaves, and in a few seasons (unless manure is artificially given,) the wood will begin to de-

cline and go to decay. Hence, we must beseech all our good orchardists and fruit-growers not to forget that dead leaves are worth looking after. They should be held fast in some way, either by burying them about the roots of the trees from which they fall, or by gathering them into the compost heap, to be applied when duly decomposed in the spring.

And this leads us to say that an excellent, and perhaps the best, mode of using leaves for the orchard, fruit garden, or any plantations of trees or shrubs, is the following: Take fresh lime and slake it with *brine*, (or water saturated with salt,) till it falls to a powder. This powder is not common lime, but muriate of lime. Gather the leaves and lay them up in heaps, sprinkling over every layer with this new compound of lime, at the rate of about four bushels to a cord of leaves. This will be ready for use in about a month if the weather is mild, or it may lie all winter, to be used in the spring; but in either case, the heap should be turned over once or twice. The lime decomposes the leaves thoroughly; and the manure thus formed is one of the most perfect composts known for *trees* of all kinds. We need not add that its value to any given kind of tree, as, for example, the pear, the apple, or the oak, is increased by using the leaves of that tree only; though a mass of mixed leaves gives a compost of great value for trees and shrubs generally. The practice in the best vineyards, of burying the leaves of each vine at its root, every autumn, is not only one of the most successful modes of manuring that plant, but one founded in the latest discoveries in science.

The most economical mode of making manure, in most parts of the country, is that of using muck or peat from swamps. Though worth little or nothing in its crude state, it contains large quantities of the best food for trees and plants. No cultivator, who has it at command, should complain of the difficulty of getting manure, since he can so easily turn it into a compost, equal in bulk to farm-yard manure.

The cheapest mode of doing this, is, undoubtedly, to place it in the stalls underneath the cattle for a few days, and then lay it up with the barn-yard manure, in the proportion of one part muck to six or eight parts manure. The whole will then ferment, and become equal in value to the ordinary product of the barn-yard. But a much more practicable mode for horticulturists—who are not all farmers, with cattle yards—is that of reducing it by means of ashes, or lime slaked with brine.

As we have already pointed out how to use ashes, and as we think, after what we have observed the past season, the latter mode gives a compost still more valuable for many trees than ashes and muck, we recommend it to the trial of all those forming composts for their orchards and gardens. The better mode is to throw out the peat from the swamps now, or in winter, expose it to the action of the frost, and, early in the spring, to mix it with the brine-slaked lime, at the rate of four bushels to the cord. It should be allowed to lie about six weeks. The good effects of this compost, when applied as a manure to the kitchen garden, or mixed with the soil in planting trees, are equally striking and permanent.

We cannot let the opportunity pass by without saying a word or two about that much lauded and much abused substance—guano. Nothing is more certain than that, in Peru and England, this is the best of all manures; or that in the United States, as it has hitherto been used, it is one of the

worst. Now, as a substance cannot thus wholly change its nature in these different countries without some good reason, we are naturally led to inquire, what is the secret of its success?

If we recall to mind the facts, that, in Peru, guano is no sooner applied than the land is irrigated, and that in England no sooner is it spread over the land than a shower commences; and that this shower, or something very near akin to it, keeps itself up all summer long, in the latter country; and if we then recollect, that in the middle states, five summers out of six, any substance applied near the surface of the ground is as dry as a snuff box, for the most part of the time, from June to September, we shall not be greatly at a loss to know why so many persons, in this country, believe guano to be nothing more or less than a "humbug."

If any very good proof of this were wanted, we need go no further than to the exotic florists in our cities, who cultivate their plants in pots, for their experience. They are nearly the only class of cultivators among us who are sturdy champions for the use of guano. The reason is plain. They use it only in the liquid state, and apply it so as to give the plants under their care every now and then a good wholesome drink,—a thorough soaking of a sort of soup more relishing to them, than any in M. Soyer's new cookery book, to an epicure in a London club house.

Now it is quite impossible for an American cultivator to do anything worth mentioning, in the way of watering his trees or crops with liquid guano; partly because labor is too dear, but mainly because the air is so dry and hot, that in a few hours the earth is drier than before; and so all good effects are at an end. What then is to be done, to enable us to use guano with success?

We answer, in a few words. Use it in the autumn.

We know this is quite contrary to the advice of previous writers, and that it will be considered by many a great waste of riches. But our advice is founded on experience,—an ounce of which, in such a matter as this, is worth a ton of theory drawn from observation in other climates.

After having tried guano in various ordinary modes, at the usual season, and with so little satisfaction as to find ourselves among the skeptics as to its merits for this country, we at last made trial of it in the autumn. We spread it over the soil of the kitchen garden, before digging it up at the approach of winter, and, to our astonishment, found our soil so treated more productive, even in very dry seasons, than we had ever known it before. We have also recommended it as an autumnal manure for enfeebled fruit trees, (turning it under the surface at once with the spade,) and find them wonderfully improved in luxuriance and vigor. In short, our observations for the past two years have firmly convinced us, that in all parts of the country, where the climate is hot and dry from June to October, guano should be used in the autumn. Applied at that season, and turned under the surface by the plough or spade, so as not to waste its virtues in the air, or by surface rains, its active qualities are gradually absorbed by the soil, and, so far from being lost, are only rendered more completely soluble, and ready for feeding the plants when the spring opens.

Guano, applied as a top-dressing, or near the surface, in the spring, is undoubtedly a manure of little permanence,—generally lasting only one season; for it always

loses much of its virtue in the atmosphere. But when buried beneath the surface, it becomes incorporated with the soil, and its good effects last several seasons.

The common rate of manuring farm lands is 300 lbs. of guano to the acre. But when old gardens are to be manured, or worn out orchards or fruit-yards renovated, we find 600 lbs. a better dressing. We would recommend its use at any time between the present moment and the frosts of winter. It should be spread evenly over the surface, and immediately turned at least three inches below it.

At the present price of guano, it is certainly the cheapest of all manures to be bought in the market; and as it is undeniably richer in all the elements necessary for most crops than any other single substance, it deserves to have a more thorough trial at the hands of the American public. We commend it anew to all those who have once failed, and beg them to try it once more, using it in the autumn.

The large proportion of phosphate of lime which exists in Peruvian guano, makes it very valuable for fruit-growers; and a good dressing of guano—so that it visibly covers the surface under each tree—dug under during the month of November, will certainly give a most thrifty and healthy start to the next season's growth, as well as prepare the tree for the highest state of productiveness. The concentrated form of guano, saving, as it does, so much labor in carriage and spreading over the soil, is no small recommendation in its favor to those whose finances admonish them to practice economy of means and time.

We might enlarge upon manures, so as to occupy volumes. But it will suffice for the present, if we have drawn the attention of our readers to the fact, that food *must* be supplied, and that the present is the time to set about it.

TRANSPLANTING ON THE UNBROKEN PRAIRIE SOD, &c.

BY J. R. HAMMOND, SHANDY HALL, MO.

Dear Sir—Indebted as I am for all my success in farming to agricultural and horticultural publications, and being willing to reciprocate the obligations I am under to others, as much as lies in my power, I have concluded to send you a statement of my experience in arboriculture in the western wilds, which you are at liberty to dispose of as you may think best.

My business is that of farming; but having purchased a farm in the open prairie less than two years ago, with little more than a dozen trees on 240 acres, (leaving out a little clump of crab apple bushes,) and as there are now growing on the same place, exclusive of an orchard of 200 fruit trees, about 5000 locust and forest trees, all thrifty and luxuriant, every one of which has passed through my own hands, and having been successful beyond my utmost expectations,—not losing exceeding one per cent. in all that I have transplanted, it may not be amiss to note down, for the benefit of beginners, my *modus operandi*.

About 90 acres of the land had been broken up and put in cultivation; but immediately around the house was a smooth and unbroken prairie. This, having been neither grazed, mowed nor burned for several years, was covered with a very thick

sod. I fenced off about an acre for a garden; and in that acre, the only things like a tree or shrub were five or six stunted cherry sprouts, about 18 inches high. The man who had lived there before I bought, informed me that he had set out a great many trees around the house, but somehow or other he could not get them to live. He said he did not think that trees set in the prairie sod, without breaking and letting it rot, could be made to live. All the neighbors with whom I conversed on the subject, were of the same opinion, and advised me to break my ground in the spring, and then wait until the next spring, when the sod would be well rotted before beginning to plant. This advice, however, did not exactly coincide with my impatience to commence operations.

Leaving out of view the luxury of a good shade in the dog days, the idea of living a whole year with nothing to relieve the monotony of a prairie landscape, but long strings of worm fence, varied by an occasional gopher hill or haystack, I could'nt stand it. So, when spring rolled round, instead of getting a prairie plough and going to work, "breaking," I took my wagon to the woods, and dug up some thirty forest trees of different kinds, such as Mulberry, Black and White Walnut, Elm, Oak, Coffee Bean, and Sycamore; the most of them from 15 to 30 feet high. Having the holes already dug for their reception, and from 4 to 6 feet across, I aimed to leave roots enough on the trees to fill the holes. In addition to these, I also procured from a neighbor about the same number of Locust trees, from 20 to 30 feet in height. Before planting them, I sawed all the largest off to within about 10 feet of the ground, and putting the sod into the bottom of the hole, set the tree on it and filled up with the same soil that came out of the hole.

Now for the result. Out of the 60 trees thus planted, all are now living but two, and growing finely; and those two started and grew through the summer, but, by some means, were broken down last winter. Some of the Locusts threw out limbs 8 feet long the first season. The tops growing so rapidly, I was fearful the high winds, to which they are exposed in the prairie, would break them off this spring; therefore, I cut the limbs all off to within a few inches of the bodies of the trees. Many of them have since thrown out limbs from 10 to 12 feet long and are still growing, and will continue to do so for a month or more.

Last spring I set out some 20 more from the forest, among which, in addition to some of the kinds before planted, were Ash, Box Alder and Crab Apple. They are also doing well, with the exception of one of the Crab Apples, which looks somewhat debilitated; but I think it will get through. Notwithstanding the large size of some of them, and the long tops they threw out the first season, together with their exposure to the winds on the prairie, I have not had to stake but one in the whole number which I transplanted both seasons. All that was done to them, after they were set, was to work around them with a hoe every two or three weeks, until the latter part of August, keeping the ground loose and clean as far around as the hole was dug. One good hoeing is worth more than a hogshead of water, the way it is generally applied, in transplanting trees; and I have no doubt that by its injudicious application, in this operation, it has caused the death of ten trees where it has saved the life of one.

I dwell on this subject for the purpose of impressing it on the minds of those who, like myself, have settled on the open prai-

rie, and who live on, from year to year, without a tree to interrupt the scorching rays of the summer's sun, or relieve the tedious monotony incident to open prairie situations, or break the piercing blasts of winter, because, forsooth, some one has told them that trees will not grow in the sod; and they can never get the time to break up their enclosures, or something turns up to prevent them. I repeat, I dwell on it for the purpose of impressing it on the minds of such as these,—that trees will grow there if rightly managed.

"Oh, but," says one, "it is so much trouble, digging such a great big hole,—4 to 6 feet across, and 18 inches to 2 feet deep, in tough prairie sod." Well, my good fellow, if it's your calculation to get through this world without trouble, and with as little mental or physical exertion as possible, I advise you not to bother your brains about embellishing your home with trees. These directions are not addressed to you. Pass on to some more congenial subject. But to those who are disposed to put themselves to the trouble of transplanting trees into such situations, I would put this question, and they can make the calculation for themselves. How much more trouble is it to dig up one tree, with roots sufficient to fill a hole 5 feet across and 18 inches deep, set it, and loosen the soil about it three or four times during the season, than to transplant a dozen into holes the size and shape of a wash-bowl, drive up stakes by each one and tie them, to prevent the wind upsetting them, water a dozen trees the first two months, half a dozen the next two, and so on, the labor diminishing as they gradually die off, until, at the end of eighteen months, a little stunted, scrubby, sickly looking thing, which, by courtesy, is called a shade tree, remains to disfigure, instead of embellishing your grounds? This is no fancy sketch I have seen this very process gone through with often.

I shall now proceed to notice a subject of far more importance, in a pecuniary point of view, to farmers living remote from timber, than that of growing trees for shade and embellishment; and that is, the growing of timber for fences and fuel. It has often been a matter of surprise to me, while travelling through the extensive prairies of the west, to find so few of the farmers turning their attention to the raising of timber.

Many of them haul all their timber three, four and five, and some as much as ten miles, year after year, through rain, snow and mud; whereas, by about ten days' labor each spring, for three years in succession, they might, in the course of ten years, have an abundance of timber for fencing and fuel,—two of the most important items in a prairie farmer's account. I now have growing about 3000 Locusts, which I set out last spring, besides some 2000, still in the nursery, which I design transplanting into the grove next spring. Although I kept no account of expenses, I have no idea the 3000 I transplanted last spring have cost me, from the gathering of the seed to this present moment, (allowing a fair compensation for the labor bestowed upon them,) 50 cents a hundred, or 5 dollars a thousand. From this time henceforth, they will be no expense.

My mode of transplanting them from the nursery was as follows: I had the ground broken up very deeply, and laid off four feet apart each way. I then cut the tops off the scions close to the ground, dug them up with a spade, and cut the tap root off pretty close. The only advantage that I recognise in cutting off the tap root is, that they are easier set. I then com-

ienced in the first row, and dropped one in every other cross, and in the second the same way, alternating the crosses so as to make the tree in one row opposite the vacancy in the other, and so on through the patch. A brisk hand will set out from 800 to 1000 in a day, with another to dig and drop them. All that is necessary, is to draw on dirt enough to cover the roots, tramp it down, and then draw on a little more, so that the surface shall be loose. I consider it decidedly preferable, in transplanting young Locusts, to cut the tops off at the ground. They are easier set, more likely to live, and, at the end of two years, are larger than if the entire tree had been planted. I don't think there are a dozen missing out of the 3000, and they will average five feet in height, and are still growing rapidly. After setting the Locusts I planted the vacancies with pumpkins, potatoes, &c., and cultivated all together with the plough and hoe. I am getting tired of drawing rails six miles; and am in hopes, that by the time my fences rot down that I now have, I shall be able to renew them nearer home. I want to plant a few bushels of Black Walnuts next fall; and shall try the Osage Orange next spring, if I can procure the seed. Respectfully yours,

J. R. HAMMOND.

Shandy Hall, Cooper co., Mo., Aug. 6, 1849.

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[We are glad to hear of such enterprising planters on the Missouri prairies. ED.]

THE CULTURE OF THE DAHLIA.

BY WILLIAM CHORLTON, STATEN ISLAND.

SIR—Having seen in a late number a request for information on florists' flowers, and not having seen it answered, perhaps my humble suggestions, which are founded on experience and sound practices, may be of use to your subscribers. If so, I shall be glad to transmit, from time to time, notices of other favorites of the florist.

In penning the following remarks upon the propagation and cultivation of that most showy and symmetrical of flowers—the Dahlia—it is not my purpose to write an elaborate essay, but to state simply and plainly the proper method of bringing that flower to the greatest perfection; not merely for the purposes of exhibition, but as an ornament in the flower garden, which, if carefully followed, is sure to lead to ultimate success and satisfaction.

The Dahlia is named in honor of ANDREW DAHL, a Swedish botanist, and a pupil of LINNÆUS. It belongs to the class Syngenesia, and order Superflua, of the sexual, and to the order Compositæ, and sub-order Heliantheæ, of the natural system of botany, and is a native of Mexico,—growing wild in shady grounds. It was sent to Madrid in 1789, and thence to England in the same year; but the plants being lost were reintroduced by LADY HOLLAND, in 1804. Some botanical authors enumerate several species, as *D. superfluas*, *D. frustranea*, *D. segregata*, &c., which have now become so intermixed by cross breeding that, in a cultivated form, all traces of a specific distinction are destroyed. I very much doubt if they were ever anything more than accidental varie-

ties. In its natural state it is single, or only semi-double; but the combined efforts of florists, through a series of generations, have been eminently successful, and have so altered the form and whole appearance that we now gaze with wonder upon its symmetry and brilliance.

As there are certain criteria by which the florist is guided in deciding the relative good properties and excellence of flowers, it may be well to mention that in the Dahlia, the plant should be of free and healthy growth, stiff and bushy habit,—growing from two to five feet high. The flower should be supported upon a strong footstalk, and rise above the foliage, forming, in its general outline, a half globe, with the eye not sunken. The petals should be solid in texture, and incurved, but not so much as to show the back, with the ends nicely rounded, not pointed, and regularly placed, so as to form a perfect imbrication. The colour bright and clear; if parti-coloured, the markings should be well defined and regular. The Dahlia may be propagated by seed, offsets from the root, or by cuttings.

Propagation from Seed.—It is little use to resort to this method of increase, except when new varieties are required; and in order to get new, and at the same time improved sorts, it is necessary that some care should be taken in crossing and saving seed. This is indispensably necessary to insure success. Fifty plants from seed, carefully hybridized, will bring more good sorts than a thousand neglected ones. In saving seed, select two kinds, possessing first rate properties, and between which, in colour, &c., it is wished to have a cross; then, with a camel hair pencil, take the farina or yellow dust of one, and place it upon the stigma, or little yellow thread in the centre, at the core of the petal of the other; and choose the best formed petals. Remember that the progeny is generally disposed to retain the constitutional features of the one made into the mother, (if I may be allowed the expression,) while the markings and colouring of the father generally prevail. This I have found in practice to be almost an universal rule; and as no flourish of physiological theory is here needed, I only state what may give satisfaction and pleasure to those who wish to embark upon the florist's boundless ocean, which is not yet half explored. About the middle of February the seeds may be sowed in pans in a hot-bed, or hot-house. When the first rough leaves are formed, they may be pricked out singly into small pots, and kept in the same temperature till they have grown about five or six inches, when they should be removed into a cool airy apartment, which will cause them to become stocky and strong. About the middle of May, when all danger of spring frosts are over, they may be planted out, and treated in the same way as the general stock. They will flower the same season, when all the worthless ones can be rejected, and the rest retained. It is well to keep any that show signs of goodness, though perhaps not up to the standard; as sometimes, the following season, these may come out better than expected.

Propagation by Offsets from the Root.—This is performed by dividing the root; care being taken, that with every division there is one or more eyes, (which are placed around the base of the stem, or upper end of the tubers,) left to the tuber taken off. These may be planted out in the open ground about the latter part of April, or beginning of May. Recollect that the more the Dahlia can be kept back in the spring, in this climate, the dwarfer it will be in autumn, and the better it will bloom.

Propagation from Cuttings.—This method is the most generally resorted to when increase of stock is required. About the middle of February place the roots intended for increase in a warm house, or hot-bed frame; if the tubers are covered with soil, the better, though this is not absolutely necessary, providing they are placed upon a damp surface of soil or sand, into which the tubers will emit roots. They will soon develop young shoots, which should be taken off when about two inches long, taking care, if much stock is required, to leave the base eye to the tuber, which will soon again throw up other shoots; and by following on the same course with subsequent croppings, the cuttings may be multiplied almost ad infinitum. Be careful to leave an eye at the heel of each cutting; for, although they will grow and bloom the same season, without this precaution, they will not again form eyes for another year. Place the cuttings in thumb-pots, and keep them in a close warm temperature until rooted, which will be in about a fortnight, when they may be removed into larger pots. Keep them in the same place for a few days, then take them into a cool airy house or frame, keep them near the light, and give plenty of air, and be careful that they do not suffer from want of water; this will cause them to grow stiff and short jointed, which is a great desideratum; for if they once get weak they never, during the season, perfectly recover it; neither do they form as handsome plants when full grown. Cuttings may also be taken off the plants, after planting out, any time during the summer, though the early and the latter part are the best; as success is not so certain during the intense heat. These cuttings, if taken off not later than the middle of September, will form nice little tubers, and may be kept in the pots in which they are rooted. These are often very useful in case of accident with the old roots.

To grow the Dahlia to perfection, it must be planted in a rich soil and an open aspect. It is well to forecast the season before, where it is intended to grow them. Let the soil be trenched two spit deep in the fall, and mix thoroughly plenty of good stable manure, well rotted; leave it rough all winter. In spring, it should be well forked over to the depth it was dug, which will incorporate the manure with the soil, and add to its fertility by admitting the air freely through it. Unless the dung is completely rotten, and well mixed with the soil, it will cause the plants to run to over-luxuriant growth, and the flowers will be small, and apt to come semi-double. This is a point in which many err; and some of the finest sorts get a bad name on this account. Where a large quantity are grown, and ornamental flower beds can be dispensed with, it is well to grow a crop of celery or other vegetable on the ground the season before planting, taking care to manure the preparatory crop very freely. This will put the land in first rate order. Immediately before planting, let the soil be again forked over to the depth of six inches. About the third week in May, the plants may be finally planted out, not nearer than five feet apart, carefully retaining the ball of earth when taken out of the pots. When they have fairly started growing, pinch out the tops, which will cause them to throw out side shoots; when these have grown sufficiently, thin them out to three or four, and bring them down nearly horizontal; but be careful not to break them off at the base, tie each branch to a stake and, as growth progresses, thin out all weak and superfluous shoots, cutting them close to the stem. If fine blooms are desired, al-

low freedom of air and light. After planting, give a good soaking of water to each plant, and cover the surface over two or three inches with rotted manure, which will prevent the sun's scorching rays drying up the moisture, and keep the soil in a more equable temperature. Attend carefully to watering in dry weather; little and often is of no use; one good soaking is worth twenty sprinklings. Nothing more is now required but occasionally tying the branches to the stakes as they progress in growth, but do not bundle them together; all that is required, is to prevent them breaking down. The flowers are wonderfully improved if covered from the light, which may be done in a variety of ways, that will occur to any ingenious mind. The best I have ever tried is with a square board, having a hole near the side to slide it down on to a stake, and a slit cut through about midway from the opposite side. The stalk of the flower, just before expanding, is drawn through the slit, which brings it to the middle of the board, and the flower on the upper side of it. It is now tied to the stake, which keeps it firm; and a flower pot is inverted and placed upon the board, which covers the flower. This is necessary, if the highest point of perfection is required in any individual flower; but as it is not my wish to encourage the same scarecrow appearance in this country, which attends an enthusiastic Dahlia-grower's garden in England, I merely mention the thing *en passant*.

This noble flower may be grown to great perfection without it, by simply following the above hints. It may be thought by some that this is an extravagant plan, incurring much labor. To all such I would say, only give my method a fair trial one season, and you will no more go back to your straight stem, tight tied, nine feet, grenadier looking plan; for the Dahlia can be grown to as great perfection, and be kept quite as dwarf in this country as it is in the old one, if the right means are adopted.

The following is a list of 50 of the best kinds in cultivation:

White or Blush
Marchioness of Cornwallis. (Whale's,)
Queen of Sheba, (Watkinson's,)
Empress of Whites,
Marchioness of Lorn, (Cutter's,)
Antagonist. (Bragg's.)
Optimus, (Widnall's.)

Pink and Rose.
Felix, (Drummond's,)
Rose d'Amour, (Batteur's,)
Mrs. Shelly,
Lady Stopford, (Trentfield's.)

Crimson and Purple.
Captain Warner, (Girling's,)
Marquis of Aylesbury, (Sparry's,)
Minn, (Drummond's,)
Sir Edmund Antrobus, (Keyne's,)
Louis Phillipe, (Turner's,)
Standard of Perfection, (Keyne's,)
Caractacus,
Pickwick, (Cormack's.)

Scarlet and Red.
Shylock, (Collison's,)
Scarlet Gem, (Turner's,)
Beeswing, (Drummond's,)
Scarlet Unique,
Box, (Drummond's.)

Orange and Yellow.
Mirabeau,
Cloth of Gold, (Edward's,)
Princess de Joinville,
Toison d'Or, (Batteur's,)
Hon. Mrs. Herbert, (Brown's.)

Tipped and Shaded.
Andromeda, (Collison's,)
Conspicua, (Girling's,)
Delicata,
Gem, (Oakley's,)
Lady of the Lake, (Keyne's,)
Gloria Mundi, (Headly's,)
Lady Featherstone,
Magician, (Turner's,)
Princess Radziwill, (Gaine's.)

Maroon and Dark.
Admiral Stopford, (Trentfield's,)
Queen of Gipsies,
Berryer, (Turner's,)
Duke of Cambridge, (Wyness',)
Essex Triumph.

Striped.
La Carnation, (Girling's,)
Roi des Pointes,
Fancy Boy, (Gaine's,)
Bicolor,
La Lione,
Mr. George Clayton, (Bragg's,)
Madame Chauviere,
—— Meilley.

I have the honor to be yours, most obediently, WM. CHORLTON,*

Gardener to J. C. Green, Esq., Staten Island.

* An excellent article; and we shall be glad to hear from Mr. C. again. ED.

INVISIBLE IRON FENCES.

BY HENRY W. SARGENT, ESQ., WODENETHE.

[An iron fence, at once light, substantial, inconspicuous and cheap, is a great desideratum in this country; and we have, as yet, seen nothing of the kind so entirely satisfactory, in all these respects, as one at Wodenethe, the seat of Henry W. Sargent, Esq., of which he has obligingly prepared us the following description.

We especially commend this fence for ornamental grounds. In this country, where labor is dear, by the aid of a fence of this kind, a large surface of grass may be kept in admirable order by sheep, so as to give the effect of a lawn kept short by constant mowing, at little or no cost. Ed.]

My Dear Sir—Annexed is a rough sketch of my wire or invisible fence, respecting the cost and construction of which you requested me to give you some details.

I take common bar iron, $1\frac{1}{4}$ inch wide and $\frac{1}{4}$ inch thick, and cutting it into lengths of 5 feet, I round off the heads, sharpen to a gradual point the feet, and then pierce it with five holes to receive the wire, at the distance of 8, 9, 10, 11 and 12 inches, which are the distances of the sheep and lamb hurdles in England.

These form the uprights, and are driven 9 inches into cedar, locust or chestnut posts, 18 inches long, and 5 or 6 broad, which are placed immediately below the surface of the ground, leaving only the wire uprights to show above, and are heavily rammed down,—making them rather firmer (there being less resistance to wind and other ordinary pressure,) than posts set for common board or picket fence. These uprights are set 5 feet apart. 6 or 7 would, I presume, answer equally well; and after being plumbed, the wire is drawn through and fastened securely, in hundred feet lengths, to a stout post of cedar or other wood, unless one has the good luck to find a tree, which makes a much stronger and less visible finish. I find it difficult (using simply a crow-bar as a lever,) to draw the wire tight and straight, at distances much greater than 100 feet. The wire I employ is No. 4, about the thickness, or a trifle larger than a common quill, and costs in New-York, at wholesale prices, $5\frac{1}{2}$ per lb.; though I since learn it can be purchased at $4\frac{1}{2}$ cents.

The cost of making the fence depends somewhat upon the soil. In many soils, a common post-hole auger can be used. My soil being stony, the holes were dug, and cost 4 cents apiece. My cedar posts (18 inches long,) 7 cents each; making the cost of 100 feet of fence about $13.40, or about $13\frac{1}{2}$ cents per foot, as follows:

20 uprights, weighing $5\frac{1}{2}$ lbs. each, 110 lbs., at 4 cents,.....	$4 40
500 feet wire, weighing 100 lbs., at $5\frac{1}{2}$ cents, ...	5 50
20 cedar posts, digging holes, staples, &c., ...	2 50
Labor putting up, 2 men half a day,	1 00
Per 100 feet,.....	$13 40

Of course, the expense is increased or diminished by increasing or diminishing the number of posts. In my woods, I run the wires from trees, and require only 5 to 10 uprights, instead of 20, as in the above estimate, and in some cases none at all; while upon my lawn, I have employed 25

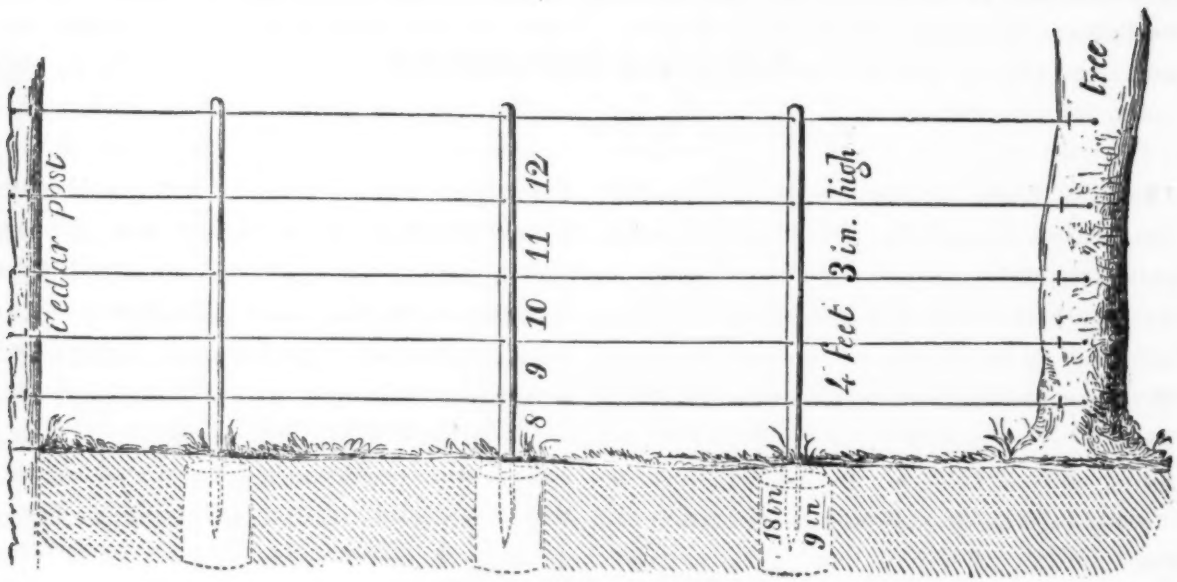

Fig. 86.—*Invisible Iron Fence.*

to the 100 feet, in order to make the wires tight and straight. In my woods, I have ran over the fence with coal tar; upon my lawn, it is painted grass green. Where stone is plenty and wood dear, as in England, the former material may be used at about the same cost; supposing your stone cost you nothing, by using an old wall, for which you substitute this wire fence. The blocks of stone should be about a foot square, and have one flat side. The holes could be drilled for 4 cents each; and it would require 1 lb. of lead, at 4 cents, to set the uprights, which, in this case, would need to be inserted only 3 or 4 inches instead of 9, as in wood. About 2 cents would thus be saved on each upright. Without paint, which is a mere trifle, we may estimate this fence at costing from 6 or 7 cents a foot, up to 13 cents. In woods, where no uprights are required, there is simply the cost of the wire and staples and labor, in securing from tree to tree. The cost then increases as you get out of the woods, and the number of trees to be used as supports diminish, until in a clear field. Where all your uprights and supports are wire or wood, it becomes the most expensive. There are, however, few ornamental places where the trees cannot be well worked in. I should add, that after the fence is put up, each upright is secured to the wire by a little wedge of wood, or a small nail, which renders it much firmer than merely straining it from the two ends.

Too much has been already said and written upon the subject of wire fences, to require any remarks from me upon their beauty and economy. Even upon farms, they are cheaper and more durable, and vastly more economical, than anything else, since no ground is lost on either side; and the plough and the scythe can be used immediately up to and under them. Upon ornamental places, especially of any size, I consider them almost indispensable to high keeping.

The great fault of our places in America, is the want of a proper termination to the ornamental grounds; or, rather, some intelligible division between the ornamental and practical. I say intelligible, because we all keep under the roller and scythe, every two or three weeks, a certain quantity of lawn, say from 100 feet to an acre

or more, and at the end of the last swath starts up a hay-field, which is mown over perhaps twice in the season; but in most cases, there seems no good reason why the lawn ends and the hay-field begins just where they do, instead of 10 or 100 feet one way or the other; in fact, there is no good reason, for the length and breadth of the lawn often depends upon the horticultural zeal or pecuniary position for the moment. If the first mowing of the season is made under the receipt of an increased or unexpected dividend, the lawn gets a swath or two more, and a cock or two of hay is subtracted from the harvest; while the next year, under a smaller income, thrift conquers taste, and the lawn, instead of being shorn of its grass, is shorn of its fair proportions.

The wire fence, therefore, forms an agreeable termination or setting to our ornamental grounds; or, if needs be, a division between the dressed and undressed portions of the estate. By its adoption, we might materially diminish the amount of lawn now kept under the scythe,—producing similar effects by substituting cattle—especially sheep—and increasing very much the charm of the landscape by the introduction of animated nature.

I doubt if the keenest eye can detect my fence at 30 or 40 yards distance. Consequently, our finest places even do not require a lawn larger than twice this breadth in diameter, provided the grass on the other side is kept equally short by sheep.

Your parks or grazing fields can be as well planted by surrounding the trees, or clumps, or shrubs, by the invisible fence, which are quite lost against the foliage; and the walks can be quite as much extended by wire gates.

It is quite astonishing in England how very small the proportion of mown lawn is to that which, by the use of the invisible fence, is kept equally short, and almost in as high order, by grazing. At Windsor Castle, I should doubt if the mown border, or strip of grass round the park side of the castle, exceeded 50 to 100 feet up to the wire fence, beyond which they were planting, in June last, large masses of Rhododendrons, Laurels, Portugal Laurels, &c., in the park, which they protected from the thousands of sheep and deer that surrounded them by invisible wire fences.

At Longleat, the magnificent seat of the Marquis of Bath, there is a strip of some 300 feet of *mown* lawn, planted with rare shrubs, between the river and one side only of the house, and separated from 600 acres of grazed park by the invisible wire fence. At Wilton House (the Earl of Pembroke's,) Appelder Court (Lord Yarborough's,) Goodwood (the Duke of Richmond's,) Blenheim, Chatsworth, Stowe, and many more that I remember, the amount of *mown* lawn consists really of little more than the grass borders of walks, or the strips that surround or divide plantations in the gardens and shrubberies. Three sides of the house are thrown open, and kept short by deer and sheep.

By the judicious introduction of wire fences, I have thoroughly tested the strength of this fence against cows and sheep; and I doubt very much whether an ox could break it,—the wire being *annealed*. Besides, here, as in England, cattle seem to avoid it, as if suspicious of some trap.

In connection with this fence, I have now made, by a common blacksmith, 6 and 10 feet long, hurdles, costing, the first $2, and the last $2.50 each. In England, the same weight costs 4s. 6d. sterling, (about one dollar,) and 30 per cent. duty, and 20 per cent. freight, and charges $1.50 for

six feet hurdles, which are still cheaper. The horizontal rods to these are made of three-eighths inch iron, and quite firm; they have two feet, and are pinned to their neighbors by screws. These are very useful in temporary divisions to your fields, and in temporary protection to shrubberies and plantations. I am, my dear sir, faithfully yours, HENRY W. SARGENT.

Wodenethe, Fishkill Landing, Oct. 11, 1849.

DESCRIPTION OF THE MADISON PLUM.

BY DR. H. WENDELL, ALBANY.

A. J. DOWNING—*Dear Sir:* I wish to call the attention of pomologists, through the Horticulturist, to a new accidental seedling plum, which has originated in the garden of ISAAC DENISTON, Esq., of this city, and which we have determined to call the *Madison Plum.* It was first publicly exhibited at the annual autumn show of the Albany and Rensselaer Horticultural Society, on the 20th of September; but the fruit was not sufficiently mature at that time, to enable the committee to judge of its character. Allusion to it, however, will be found in their report. I annex an outline and description of the fruit. Yours very truly, HERMAN WENDELL, M. D.

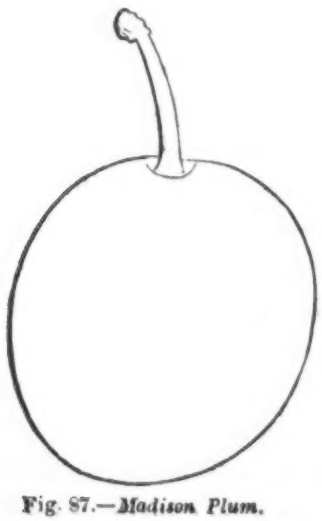

Fig. 87.—*Madison Plum.*

Size—medium; being usually an inch and four-tenths in depth, by an inch and three-tenths in breadth.

Form—roundish oval.

Exterior colour—light golden orange, slightly tinctured with a greenish cast, and faintly marked with pale yellow; the exposed side beautifully blotched and spotted with deep, rich, lake carmine, and the whole surface faintly suffused with a delicate bloom. Such specimens as are shaded from the sun's rays have very few, or none of these blotches or spots.

Colour of flesh—deep golden yellow.

Texture—somewhat firm, though not in the least tough; but, on the contrary, rather melting, and well supplied with rich, delicious juice.

Flavor—richly saccharine, and very agreeable.

Stone—irregularly oval, rather pointed, small, and non-adherent to the flesh.

Stem—about three-fourths of an inch in length, not very stout, curved, and inserted in a regular, but not deep, depression, usually a little on one side of the base.

Suture—quite shallow, frequently nothing more than a line, but uniformly visible, and extending from apex to base.

Colour of wood.—The young summer shoots are green, the old wood greenish brown, and not in the least downy.

Growth.—The tree is upright and rather spreading, as well as quite thrifty in its growth; the stems and branches are somewhat slender; the leaves are of a light

green colour, slightly downy, nearly oval acuminate, as well as obtuse serrate, and over three inches long, exclusive of the footstalks, which are short, and a line or two over half an inch in length.

Season—from the first to the fifteenth of October.

Remarks.—Notwithstanding the Madison is fully equal in every particular to a large number, and far superior to many varieties of the plum which are now placed among those of first character, still, its principal recommendations must be the late period of the season at which it comes to maturity, its prolific, and also its hardy character. The tree is now presumed to be about seven years old, and has borne the past season over three bushels of fruit, all of which, with the exception of about half a bushel—which are still on it—have been taken off for preserves, unripe. Full two-thirds of those which now remain are, as yet, unripe, and from appearances may continue so some days yet. This is the second season of its bearing, it having borne in 1847 about a peck. Last year, owing to the severe vicissitudes of the previous winter, we had no plums in this vicinity; consequently, there was no fruit on it. It is perfectly hardy; not a particle of the young wood having been destroyed during its life, from vicissitudes of temperature. It is probably a hybrid, from the Bleecker Gage; immediately adjoining one of which variety it is growing; and the Blue Gage, several of which surround it on every side.

.....

[From specimens of this variety, obligingly sent us by Dr. WENDELL, we are inclined to think it will prove a valuable acquisition. Its appearance is handsome, and its flavor is superior to that of most of the very late varieties. ED.]

RANDOM NOTES ON HORTICULTURE.

BY SYLVANUS, CINCINNATI.

DEAR SIR—A correspondent in one of your late numbers, in giving his experience on the subject of mulching, relates that he covered the surface of the ground beneath his trees with straw; and was so much surprised at the after luxuriance of all so treated, that he was inclined to think there was some influence exerted by the straw as a manure. This was not the case. The explanation is simple; but I will first give a little of my own experience the past season. I have frequently observed, during our long drouths in the west, that my trees remained perfectly inert or dormant; though shooting vigorously in the spring, all increase at those times was suspended. The cause did not, at first, strike me. Last fall, however, I planted some of our native nuts, which came up in due time in the spring, and received constant care and attention; but their growth was slow. In gathering the nuts in the autumn, however, a small pile had been left in a hole near my house; and in pruning some trees, the cuttings had been thrown over them and left there. Some time in July I perceived some green shoots forcing their way through the bushes, and, on examination, I found that some of the nuts had made a growth of three feet in that situation, while my tended plants had attained a height of only about four inches. The cause of this a

once occurred to me; and my trees, large and small, were instantly mulched, first being well forked over and watered, and in two or three days new buds began to make their appearance. In less than three weeks, trees whose leaves had all fallen off, and which I had considered as lost, had made shoots of nearly a foot in length. By mulching, the evaporation of the moisture around the roots was suspended; and as a tree cannot assimilate its juices without a degree of moisture, or extract from the earth its constituents, the ground was kept in a condition by mulching to enable it to feed, if I may so speak, without cessation. Watering, alone, would not answer the purpose; for, independent of the *caking* of the surface soil, the temperatue could not be kept equable, as constant evaporation would be going on, and the alternate heat and cold of night and day be injurious to the tree. I will add, that I mulched directly after a heavy rain, and found it expedient, as we had many weeks of dry, hot weather, to water the trees once or twice very plentifully, but without removing the covering. I have since discovered that several of your correspondents have had success equal to mine in mulching their trees.

Many persons complain that fruits do not succeed so well in the west as they did many years ago. This is in a measure true; but I think the evil is not irremediable. I will at least try and throw some light on the subject,—the result of my own experience and observation. The cherry, in particular, many persons despair of ever being able to raise. Although these trees grow well for a year or two, and some even bear fruit for a few seasons, they soon begin to decay, and finally die. Now, in the first place, the heat and long drouths we have in the west, are too much for any of the fine varieties of fruit, and particularly for the cherry. But it is usually planted with a full exposure to the sun, for the benefit, as they say, of the fruit. Now, even in our dryest weather, we have heavy dews, so that in the morning the trees look as though they had been exposed to a heavy shower. The sun, rising, darts his rays full upon their broad wet leaves. The dew is heated at once, and steams off, carrying with it, naturally, the juices imparted by the dew and from the atmosphere, as well as that transmitted to them from the roots for elaboration or digestion; and the leaves are of course prevented from performing their allotted functions. In the mean time, the effect of the dew is not felt at the roots. They are imbedded in a hard dry cake of earth, from which they in vain seek to extract nourishment. The consequence is, that the trees receive a shock that eventually must kill or render them unproductive.

Until this year, I had not been able to raise a single cherry tree; all I planted dying after one, or at most two, seasons from transplanting. This year I planted some in the shade, or, rather, where the sun could not reach the leaves or trunk until after mid-day. I also kept them well mulched, (after the time I discovered its good effect, as above stated;) and they are at this time the most flourishing trees in my orchard.

I pursued the same course with my pear trees. Not one of them has died of the blight, though heretofore I have regularly lost half I planted out.

I am now satisfied of the cause of the *blight* of this tree, at least on my own grounds. It is caused neither by an insect nor by frozen sap. Keep the tree protected, and in a constant state of action, both in its roots and leaves, and it will not blight. But let the circulation of the sap

be prevented or impeded, it soon becomes gorged in the sap vessels, the heat of the sun ferments it, and disease and death are the result. Why is it that the seedlings, found in the forest, are so healthy and so productive?—(the original Seckel, for instance.) It is because they have had a little wholesome neglect; or, rather, have been left to the care of nature. Nature never prunes, but always protects, and always mulches, when it is necessary.

I have given you above my experience for one season only; but so far, I have reason to congratulate myself on my success, and am pleased to find that many of your correspondents, who have pursued the same course of treatment, have met with like results. I firmly believe that by following up this treatment, I shall not only preserve my pear trees from blight, but that I shall also be able to enjoy the cherry in perfection.

I submit now, to you and your correspondents, the following statements:

1st. That the blight in the pear tree, is caused by the fermenting of the sap in the vessels, after the circulation has been impeded or suppressed by drouth.

2d. That the bursting of the bark of the cherry tree, and its consequent decay in the bark, is produced by the same cause.

3d. That to the same cause may be attributed the mildew of the grape; in this case, the blight taking place in the leaves and fruit.

I will close this by stating, that I never have known a pear tree to blight when it was planted in a warm, moist soil, and was protected during drouth from the intense heat of the sun. I never knew a cherry tree to burst its bark, or fail to produce, in a like situation. What is the experience of yourself, and Professor Turner, on this point? I could enlarge upon this subject, and bring a strong array of facts to support what I have written; but I prefer waiting for another season's experiment and observation. In common with others of your correspondents, who have treated this subject in your columns, my desire is to awaken attention to a subject that, to us in the west, at least, is as important as anything in the whole range of horticulture.

SYLVANUS.

Cincinnati, Oct. 6, 1849.

THE CAMELLIA JAPONICA.

BY GEORGE GLENNY.*

THIS handsome evergreen and richly flowering plant is one of the noblest ornaments of the green-house, and its robust and half hardy constitution renders it one of the most desirable of floral subjects. It is a splendid shrub or tree,—for it is as easily cultivated one way as the other,—and is a generally esteemed favorite among the permanent ornaments in the conservatory. The varieties are extremely numerous, the species few; and we are indebted to English gardeners for most of the sorts in cultivation, very few having been imported from China, and these, with trifling exceptions, appear to be only seedling varieties like our own. Nothing can be less alike in the same genus, perhaps, than the diminutive Sasanqua, and the monster reticulata, while the double white, and its companions red and striped, and others, form a sort of middle class in size, and surpass both in beauty. None of the thousand varieties reared in England seem

* From the London Hort. Magazine.

to follow either reticulata or sasanqua, so that it is possible they are distinct. Among the species and varieties earliest introduced may be mentioned Sasanqua and Semi-double Red in 1811; Double Red, 1818; oleifera, 1819; Kissi, 1823; euryoides and reticulata, 1824. Many have been received from the continent, and among them a number of rejected seedlings, bought in England, propagated and named abroad, and sent back with high sounding names and descriptions, to be bought here, and by good judges thrown away as worthless. Florists who raise seedlings, save for their own novelties some that they consider best, and dispose of the others among persons who use them for no other purpose than sending out as novelties; therefore in such cases the public suffer as badly as if the original raiser had sent them out, and in many cases he buys back, under some tempting description and name, some of the very plants he thought not good enough to name, and sometimes at a larger price than he obtained for the whole batch. It is not our purpose to inquire into the many hundreds of sorts that are now to be found in the various catalogues, nor to go into the merits of many which are so like each other, and so imperfect, as to be scarcely worth culture; but we shall give a few names of varieties that may be grown with credit, and describe our method of cultivation, which differs little perhaps from that of other people who have succeeded.

FIRST TREATMENT OF YOUNG PLANTS.

These generally come to us in a very small state. The imported plants frequently being the completion of their first growth from a bud, and not more than two or three leaves of the worked part, and often upon a stock of small size, in pots filled and matted with roots almost to solidity. These are the most difficult to manage of any, and if they were simply repotted in vessels a size larger, would be as likely to pine and die as to live. Many English plants purchased in from some nurseries will be found matted in the same way, though larger, and they are in as great danger, if merely shifted, as the smaller ones, but from there being more to cut at they would be headed in a little, to give vigor to new growth, while the smaller ones have not a leaf to spare. The first thing, therefore, to do with a new young plant, is to turn out the ball and examine the state of the roots; if they do not fill the pot, the conclusion is that the stock is young as well as the plant, but it may be that the stock has been matted in a smaller one, and that the shift it has had has not been properly conducted; but if you see healthy roots making their way round the outside of the ball, there is no danger to be apprehended; they may be be shifted, if the growth has been completed, into a pot a size larger, without disturbing the ball. If the roots are matted, take the ball out of its confinement, and soak it an hour to wet it quite through. If any part of the roots appear rotted, carefully remove them, and where they are in such a solid mat as to prevent free growth, remove enough to give the rest room to grow, and shake or wash all the mould out; better is it to cut the roots almost to the stump, than to leave on any that will not or cannot grow. Now take loam that has been formed of rotted turves; if they were cut thin, and the vegetation rotted in them, they will be found rich in vegetable mould, and would grow plants almost without any mixture; but equal quantities of peat earth and rotted cow dung, to the extent of one portion to three of the loam, will render it lighter and more porous. If the loam is of the top spit, and the turves rotted in, or the turves were originally cut very thick, the proportion of vegetable mould will be much less, and there must be vegetable mould or more peat and cow dung to compensate. If the loam be pretty nearly clean, but of good friable quality—and it ought to be the latter to answer at all—one-half loam and one-fourth vegetable mould, and an eighth each of cow dung and peat earth, will do; upon the mixing of these all ought to be rubbed through a very coarse sieve, such as would let a hazel nut through, and when mixed, if it should appear too adhesive, which is not very likely, a little silver sand may be added until it is of right texture. Now take a pot of the proper size, fill one-fourth with potsherds or crocks, then some compost, highest in the middle, enough to bring the collar of the plant

(which is where the root begins) near the top of the pot; spread the roots out evenly and fill up, pressing the soil about the fibres and bringing the compost nearly to the level of the pot; well water, and plunge the pot into a moderate bottom heat, and cover with a bell or hand glass. Although it may be directly after they have completed their first growth, this will start them again, and they will make another season of wood, even in time to flower, if it were desirable; but generally speaking, the object of an amateur and that of a florist are widely different. The nurseryman or florist wants to multiply his stock as soon as possible, and therefore makes all the wood he can. The amateur desires to get a handsome plant as soon as possible, and that does not depend on the quantity so much as the form of the wood. Supposing then we have two of these miserable little plants repotted as we have directed, the one we leave to grow as fast as it will; the other we will suppose to have not more than two or three eyes. As soon as the buds begin to swell after the repotting, unless it is bidding fair to grow handsome, take out the top bud, or shorten the shoot to two or three eyes, but if the shoot already made indicates a disposition to grow handsome and throw lateral branches, leave all on, and as they grow, merely notice that no unhandsome growth be made, by stopping any joint that grows the wrong way or out of shape. The proper form for the plant is a well regulated bush, or a handsome standard; we are now directing for the bush. The plants are to be watered rather liberally while growing, and when they are advancing pretty fast let the ball be turned out, to see if the roots have reached the side of the pot, and, before they begin to mat or cross each other, carefully shift them to a larger pot with the same compost, and return them to their place; they ought not to be checked in their growth, therefore the greatest care must be taken not to disturb the ball of earth or damage the roots, and the collars of the plants must not be sunk into the compost the least shade lower than they were before. Continue the watering while the growth goes on, but when there ceases to be any more leaves coming, and the foliage there is grown to its full size, they may first be lifted out of the plunging medium and placed on their own bottom; next, they may be removed close to the glass, and be shaded from the sun; next, to the green-house, still shaded; afterwards to a cold frame or pit; all of which time they are to have little or no water. This has so far saved a whole season of growth, and perhaps saved the plant altogether, for, as we have before observed, they do occasionally come so miserably weak, that before the growing season they would sometimes perish. The plants so pushed into second growth require care to ripen their wood, and ought not to be placed in the open air until this is effected. Cold winds, rain and damp, would be much against them, therefore there is no contrivance better adapted for them, until the wood is ripened, than a common cold frame or pit, which may be closed partly or altogether as wet or wind may render it necessary. When the wood is thoroughly ripened, it may be thrown more open to the weather, and up to September may be on a shady border. The plants will occasionally, even with such second growth, be found set for bloom at the end of each shoot. If you are still anxious for growth instead of bloom, pick off the buds at once, for the plant stirs but little all the time the buds are swelling and the flowers blooming. In short, two complete growths may be had by taking off the buds, if there be any, and placing the plants in the green-house. But it may be that the pots are full of roots, and this must be looked to now and then, by turning out the ball and examining them, for the best rule for shifting plants is to do it when the fibres begin to meet next the pot. In the new growth, which will begin much sooner from having no bloom, the same watchfulness as to handsome form must be observed, except where the growth alone is wanted for stock, because in that case it matters not where it comes; the object is to get as many buds or joints as possible. It is not to be forgotten, too, that the growth would be still accelerated by increasing the temperature, for which purpose the propagator will even submit the plant to the coolest part of the stove, or place it in a propagating house, which is always kept at a much higher temperature

than a green-house, either by means of a hot-water tank, or a bark bed, but the specimen grower will look more to the strength and beauty of the growth than its quantity. The joints are shorter, the leaves closer, and the habit therefore more compact when the plant is not hastened. These plants will have made their growth much sooner than those which are allowed to bloom; and while the propagator will carefully remove the bloom buds again, the amateur will probably allow his to perfect its flowers for the next blooming time.

PROPAGATION BY INARCHING.

Grafting by approach or inarching is a favorite mode of propagating the Camellia; for this purpose, healthy stocks of the single, or vigorously growing kinds are raised by cuttings, of which we shall speak hereafter, and are for this purpose procured two years old. A shoot of the plant which is to be propagated is bent towards the stock, the wood is cut quite square on the face, and nearly half way through. The stock is cut in a similar way, so that they fit together well; with a sharp knife a notch or slit is made, which forms a kind of tongue downwards in one, and upwards in the other, and these are tucked in a little way, so as to make the join more steady and complete than when the two are merely bound together without the tongue, although they would unite even so. These are then placed so as to make the barks of both join on one side at least, which is all that can be done if one is larger than the other, but if both stock and shoot are the same size the bark meets on both sides; the stock must be fixed so that the join may not be disturbed, and the plant, and that be kept growing. The time of the year for this operation is when the plants begin to push their growth, and the stocks are growing, and if the stocks are not growing so fast as the plant, it should be put in moderate heat and be forced, but when they are inarched they should both be put in heat, something more than the ordinary green-house, but not so warm as a stove. All the shoots that are to be inarched should be done at once, and the pots with the stocks in them so fixed, by props or otherwise, as that they cannot be shaken or disturbed. After a few weeks, say six at the least, or two months is safer, the ties may be undone, and the plants examined, to see if the union have taken place, which, if the join has been neat and the stocks in good growing order, is pretty certain; the shoot that is on the main plant may then be cut just below the join, the piece will be then fairly in the stock; when these are all cut off they may be put near the light, well watered, and the top of the stock that is above the join be taken off, and thus the whole nourishment of the stock thrown into the graft; when the growth is perfected, they may be removed into a cool pit where they can be shaded, and they will require but little water. The greatest exactness must be observed as to the state of the plants when inarched; the buds of the plant ought to begin swelling, and the stock begin to grow. If the stock be at all bushy at the top, all but one shoot must be removed, and the graft ought to be performed below, on the thickest part of the stock, that is to say, as low as the work can be well done. With regard to the shoot of the plant, be guided by circumstances; if there be two eyes above the join it is enough, but as inarching, which is troublesome compared with other grafting, is resorted to for the sake of making good strong plants at starting, they are used much larger than would suffice; many who have favorite plants with a shoot that can be spared will procure a good stock to inarch it on, and be guided by the length they wish to get rid of as to how much they will join on the stock.

PROPAGATION BY GRAFTING.

This is the best way of propagating for amateurs, because it neither keeps the plants out of their places, nor makes a litter in the house; they have only to take care that the joins are made very neatly, fit very close, and are bound firmly, but not too tight. Of the many ways of grafting none need fail; from a small piece of wood with only a single bud on it, to a good long scion, all may be made to unite; but much depends on circumstances, as to the mode employed. The stocks must be in a growing state, and the buds of the scion have begun to swell. The stocks are in general headed down,

that all the strength may be directed to the scion. Suppose, then, we have only one bud on a small piece of wood, with the leaf attached; it may be cut wedge-shaped, and the stock, which should have a bud at the highest part, should be cut to fit the wedge. The reason for a bud being at the highest point of the stock is, that a current of sap should be maintained to the top, to promote the union. Another way of grafting with a single bud is, to cut the stock with a long, sloping cut, half way through, and the but must be cut to match, and a slit ought to be cut upwards in one, and downwards in the other, so as to form a sort of steadying hold. A third mode of grafting with a single bud and its wood, is, by reversing the wedge; that is, by cutting the bud like a saddle, and making the stock the wedge: but it is not nearly so good, because you thereby lose the advantage of the leading bud in the stock. Another way of bud-grafting is, to cut the bud and the stock to fit each other, in some such way as carpenters mitre, so that the piece with the bud fits into the place mitred in the other; but the simplest is the first or second, and they are the safest to adopt. It must always be remembered that the bark of the bud or graft must touch the bark of the stock, and be completely fitted to it on one side, if not on both. There is only a necessity with regard to one side, when the stock is larger than the scion or bud; and hence it is quite certain that if a graft were put in the centre of a stock, it must fail; but that if the bark be fitted on one side it will unite; this is material. In grafting of all sorts, a neat fit, the bark of both touching, ensures success; the reverse produces a failure. In grafting a good strong scion on a stock, it is a common thing to make the union in the middle, and to let the under half, which hangs below the union, go into a phial of water tied to the place, so as to feed it with water while it is uniting; but this is only desirable when the piece intended to be grafted is too large to venture with the limited nourishment of the stock.

The advantage of all kinds of grafting over the inarch grafting or grafting by approach is, that a man may use up all those shoots which may come off, without injuring the appearance of his collection of plants, and keep the plants in their proper situations, instead of being obliged to spoil the appearance of his best specimens, by either placing the pot of stocks about his best houses, or removing his plants to another place. Camellias require very different treatment for blooming and for propagating by inarch grafting; consequently, if a handsome specimen have two or three shoots too long, or have here and there a shoot which could be well spared, he must, if he inarch it, submit the specimens to the treatment of the grafting-house, or bring the stocks into his show-house, and disfigure the plant by tying the spare shoots to stocks in pots, fixed all about it; whereas, if they were cut off at once the plant would be improved, and they would do the grafting in a proper place, without interfering with any of the principal houses.

PROPAGATING BY CUTTING.

This mode is seldom practiced for any but stocks, because of the time lost in the getting up of the plants to any size, and the generally less healthy and vigorous state of the plant in advancing years. Many of the varieties of Camellia are naturally delicate, and their growth weakly, compared with others. All the singles, and many of the semi-doubles, are of exceedingly robust habit, and these are selected for stocks. Two joints are enough for a cutting, one under ground and the other above; but as there is generally plenty of stuff to be had adapted for stocks, the ends of shoots are mostly selected, two or three joints above the soil and one joint under, because they sooner make large plants, and the top bud takes the lead. The cuttings are prepared by cutting the wood away below the bottom joint and issue of the lower leaves, that the roots may proceed from the eyes there. A pot of the ordinary kind is filled thus: crocks, one-third; compost, to within an inch of the top of the pot, levelled properly, and struck upon the potting table two or three times, to settle it moderately firm; the last inch is filled with silver sand, and the whole gently saturated with water. The cuttings are then placed very thick, not an inch apart, by sticking them through the sand

to touch the compost, but not to go into it, filling the pot all but enough room round the edge to admit of a bell glass being covered over, and the edge being pressed into the sand; a little gentle watering with a fine rose closes the sand all about the stems; and they are to be covered with the glass and put into gentle bottom heat, and a paper over them for shade. The glass may be left a few days, say three or four, without being touched; but in the event of there being the least signs of dryness, water over the glass so that it may run down inside the edge of the pot,—the sand will soon be saturated. The glasses may be removed about the fourth day and wiped, the cuttings watered all over with a fine rose, and be covered again, the glasses being first wiped dry inside. Attention to these matters must be given every morning, but on no account omitted more than one day. The lower compost, absorbing and drawing together, keeps the sand pretty dry, and every two or four hours they ought, by rights, to be refreshed, in case of the sand being too dry, and the glasses be wiped perfectly dry inside. In a few weeks these cuttings will begin to grow and root, for they will grow before they are actually rooted; and when thoroughly rooted, they should be potted off into large sixty-sized pots, one in each. Put a lump of peat, or some moss, or some crocks, in the bottom of each, an inch thickness, then a little compost, highest in the middle; now take the pot of cuttings, and water them thoroughly; then strike the pot on the table, gently, on its side, and the sand and compost will loosen on the side that is upwards; do this all round by turning the pot, when by a jerk the whole ball may be delivered on the table. This enables you to remove them one by one, with all their roots. Hold them upright, one in the middle of each pot, resting it on the soil already there, or pressing it down a little, if necessary, and spreading the roots out all round the centre, but keeping the roots pretty nearly to the top of the soil—for none of the stems ought to be buried—filling up all round with compost, gently pressed down round the side. Well water them, and keep them under glass, shut up a day or two, all shaded. If quite convenient, they would be all the better for returning to a little warmth a few days, but they must be carefully shaded. When once they have established their roots and are growing again, you must be guided by your means as to how long you will keep them in the gentle heat of a propagating-house, or pit, or declining hotbed—all of which are good for them; or whether you will pot them to make their growth without heat. When they have completed their growth, which, under any circumstances, will be in a few weeks after they start, and their wood is thoroughly ripened, or any time afterwards previous to their growing, they must be repotted into forty-eight-sized pots; and while under hand for this purpose, all the side and useless shoots may be trimmed off. The potting to be done as before, and all of the plants to be put into a brick pit, without heat, but under glass, for protection. Here they may make a second year's growth, in which state, or any time after, they will be in fine order for grafting. Many prefer very strong stocks; and although one year potted are often used, for new and scarce varieties two years old is as young as they ought to be; and so that they are repotted every year, and never allowed to be pot-bound, the older a stock is, the more rapidly does a new variety grafted or inarched on it become a considerable tree; the growth being not only more rapid, but also more vigorous and more noble; for the foliage is larger, the bloom larger and more durable, and the colours better. Stocks are hardy and healthy enough to thrive in a pit or wooden garden frame or light, after they are once established; so that it is not only little trouble, but it is very desirable to keep up a number of healthy stocks of all ages, doing a few every year, and repotting them from season to season, so as to have always ready some of any size and about every age that they can be required, whereon to graft the prunings of the best plants, and any new variety you may procure, that it may be desirable to propagate.

MANAGEMENT OF LARGER PLANTS.

The Camellia is one of the least difficult to manage of any half-hardy evergreen shrubs. They require attention of the

most ordinary kind, and not much of it. Their routine is to bloom, to commence a new growth all over, which, when completed, exhibits the bloom buds at the ends of all the shoots, to rest awhile, or do nothing but very gradually swell the buds, flower, and grow again. Many complain that their Camellias do not set well for bloom. There is one thing that will prevent them from doing so; and that is, a check while they are making their growth. This check may be occasioned several ways. Too great a change in the temperature they are growing in, want of pot room, want of moisture, want of good drainage, poor, exhausted soil; all, or any one of these, will occasion an imperfect development of the growing plant, and prevent it from forming bloom buds. It is not wise to make any changes of the pots while the plant is rapidly growing, because unless it be done with more care than is generally bestowed upon the operation, it gives a great check. When the plants are in a state of rest, that is, when the foliage has completed its growth, and before the buds begin to swell, it may be done, with care; but the safest time, and when the plant derives most benefit from it, is when the bloom has declined, and the plant is about to grow. By giving good pot room at this time, the plant is enabled to make strong, healthy growth. Turn out the balls of earth whole, remove such of the crocks or drainage as will come away without disturbing the roots; and take off as much of the surface mould as will come off without damaging the fibres. Then use a pot that is a good inch larger all round; that is to say, two inches wider across than the old one. Put in plenty of crocks, next a little of the compost, then place the ball so that it will be nearly even with the edge of the pot; fill up all round, pressing the compost between the ball and the sides of the pots, very carefully, with the finger, or hand, or a piece of wood; but on no account disturb any of the fibres that are outside the ball. When this is properly adjusted, water, to settle the compost about the roots, and place them in a protected place—a pit, under glass, is the best; and shut them up two days, without opening them to the wind, or allowing the sun to shine on them. They may then be left to make their growth, either in the green-house, the conservatory, or the pit, which should be opened on mild days, to admit air and prevent them from drawing, and constantly watched, that they never want water; for while the growth is making they require a good deal of it.

In our practice, we thought it worth while to have a canvass house, into which all the Camellias were removed the beginning of June, where they had all the benefit of the full air on warm days, though perfectly shaded from the sun by the canvass roof, which rolled up or down as required, and by the side blinds, which opened outwards, and could be set horizontally. It was as large as an ordinary conservatory; and all our hard-wooded plants, as well as the Camellias, were in it all the summer. The advantage of shading, without depriving plants of the light, is not half appreciated; and the still greater benefit arising from the supply of air through canvass, even when all closed down, to keep off high and dry winds, must be seen to be sufficiently valued. But as everybody has not got the convenience, it should be remembered that all the while the plant is making its growth, there should be no harsh wind admitted; the sun should not be allowed to shine full upon it; and every pains should be taken to prevent a check.

Another point is worth attending to, very carefully; and that is, as soon as the shoots commence growing, any that are in the way, or are growing in the wrong place, should be removed at once, to prevent the plant from exhausting itself in useless blooms. The exceptions to this are, when the plant is wanted to be propagated from, in which case all the wood may grow, to be cut off after it has ripened. The plants ought not to be disturbed until the growth has completed itself, when it is almost certain that the plants will have become thickly set for bloom. The plants may then be set in the shade, in any protected situation—the cooler the better—and there must not be any water given until the compost in which they are growing is getting towards dry. But, generally speaking, the rain affords enough. Yet, there must not be any flagging of the plants for want of moisture. It

has to be considered that they are not growing, and consequently do not absorb much moisture. The hard-wooded plants, in general, would do best in the same situation, a sheltered spot; that is to say, protected against north and north-east winds, by a fence or wall, at proper distance, and shaded by trees or canvass from the heat of the mid-day sun. They should also be on wood or stone, or paving of some kind, to prevent the roots protruding and laying hold of the ground, which causes a very dangerous check, when removed to the winter quarters. If they are necessarily placed on the ground, however hard it may be, the pot should be frequently turned round to prevent the roots from striking into the earth. Towards the autumn the bloom buds will be found to have swelled a good deal; and where they are too thick, some should be taken off. It is the habit of some to leave three or four in a bunch; this is bad, and they ought to be reduced before they are put into the blooming-house, and not more than one should be at the same joint, or if two, they should be on opposite sides of the stem.

(*To be continued.*)

THE DIANA GRAPE.

Every fruit-grower will be glad to hear that a new native grape has at last been proved, which is really superior to the Isabella and Catawba.

Such a grape, we are now prepared to say, is the Diana. It has fruited abundantly, for two years past, in the garden at Wodenethe, the residence of our neighbor, H. W. Sargent, Esq. We said nothing of its qualities last year, because we would not praise it as it deserves upon the experience of a single season; but, after tasting it again, repeatedly, this season, we do not hesitate to rank it as the best of American grapes.

Though yet almost entirely unknown in collections, the Diana was raised several years ago by Mrs. Diana Crehore, of Milton Hill, near Boston, and was very briefly described in our work on Fruits. As the climate of New-England is not so favorable to the ripening of native grapes as that of the middle states, it seems until lately to have attracted but little attention there. Some specimens, sent from Boston to the Congress of Fruit-growers in New-York this autumn, were not sufficiently matured to show the fine flavor of the fruit, as ri-

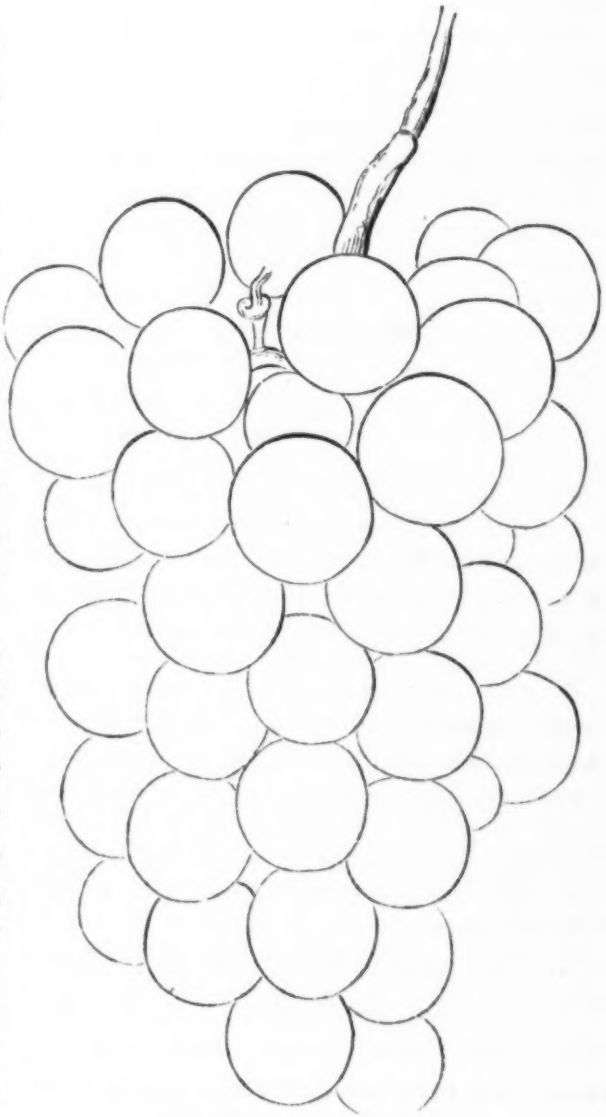

Fig. 88.—*The Diana Grape.*

pened on the Hudson. We were glad, however, to learn from the remarks of Messrs. French and Walker that it is now considered the best native grape in Massachusetts.

The Diana is a seedling from the Catawba, and, in general appearance and character, resembles its parent. It is, however, an entirely distinct variety, of a more delicate pale red colour, with less pulp and more juice than the Catawba. The bunches are also distinct, being quite compact, while those of the Catawba are always loose. It is an abundant bearer, and in its growth is equally vigorous with its parent.

The Diana, when fully ripened, is a finer flavored grape than either the Isabella or Catawba. It most nearly resembles the latter in flavor, but is more delicate, and has less of the peculiar wild taste of the native grape.

Perhaps the greatest merit of this new variety is, however, *earliness*. It ripens, on the Hudson, a week or ten days earlier than the Isabella, and, of course, a fortnight or more before the Catawba. It is evident, therefore, that it will be a decided acquisition to all those parts of the northern states where the Isabella and Catawba will scarcely ripen. It will not, perhaps, ripen so far north as the Clinton grape, (now so well known about Rochester;) but it is much superior in flavor and beauty of appearance.

We believe a few plants of the Diana may be had in some of the nurseries about Boston; but it is as yet scarcely at all known to cultivators, and we would direct the attention of nurserymen to the advantage of propagating so fine a grape.

MR. ROTCH'S COTTAGE VILLA AT NEW-BEDFORD.

DESIGNED BY A. J. DAVIS.

Our frontispiece presents an elevation of a substantial and ornamental cottage villa, built at New-Bedford, for the residence of Wm. J. Rotch, Esq., from the designs of Mr. Davis, architect, New-York.

It is a pleasing specimen of the Rural Gothic cottage; and we offer it as a study, to those about building cottages in the country.

It is, in general plan, modelled after the cottages of English rural landscape, in a style which harmonizes well with picturesque scenery.

For this climate we prefer, for a house of the accommodation afforded by this design, a full second story; which is easily given by raising the eaves about three feet higher. This enables us to introduce entire windows in the bed-rooms, leaving the apartments for domestics to be lighted by dormer windows in the attic.

Perhaps the mode shown in this design (of building one and a half story,) is more cottage-like and picturesque; but our warm climate makes a full second story so desirable, that in all but small dwellings we would endeavor to obtain it,—even at a trifling surrender of external effect.

This dwelling is built in brick and stucco, and the ornaments are carved in a heavy and solid manner, and with that attention to correctness of detail which marks all Mr. Davis's designs.

THE CONGRESS OF FRUIT-GROWERS.

Nothing could well be more satisfactory than the late session of this body at Castle Garden, New-York, during the first week of October.

The past season, so unusually unfavorable, not only to the production of fine fruits, but to the collection of information respecting them, led us to anticipate a very indifferent attendance on this occasion, and a want of that lively interest in the topics to be discussed which grows out of poor crops and disappointed hopes.

Great was our surprise, therefore, on finding the large hall, devoted to this purpose, filled with delegates from almost every portion of the United States—from Maine to Georgia, and as far west as Illinois; and greater still our gratification, to see that these were not merely so called delegates, representing the different horticultural, pomological and agricultural societies in various sections of the Union, but men of the highest stamp, as regards practical skill and pomological knowledge—the concentrated experience and knowledge of the country on these subjects; so that the officers of the meeting had only to call for information, regarding the success or the failure of any tried variety of fruit, and Maine, Massachusetts, Ohio, or New-York, or some other state, was there, in the person of her most experienced cultivators, ready to give her evidence either to damn an outcast fruit to the "rejected list," or to raise it to the company of good and tried names, worthy of a place in the orchard or garden of all seeking and doubting horticulturists. Every one attending that convention must have been struck with the great value, to the horticulture of the country, of this array of experience from so wide a range of the Union, and with the far greater importance and utility of the meetings of such an association, over those of any local horticultural society.

The first step was to appoint a committee, to meet another committee sent by the N. A. Pomological Convention, for the purpose of uniting those two bodies into a single one, of a completely national character. We are glad to be able to say that this was done by unanimous consent, and so entirely was the whole convention of the opinion that there should be but one body of the kind, that the consolidation was effected immediately, and with the largest spirit of good will and fraternity on all sides. The consolidated association is to be known hereafter as the *American Pomological Congress*, and is to hold its next session at Cincinnati, in September, 1850.

After this, the chairman of the general fruit committee brought forward a "rejected list" of fruits, considered unworthy of large cultivation. Notwithstanding a little opposition from a few of our friends, who are pomological universalists, and think that not even choke pears are worthy of eternal condemnation, the Congress entered very heartily into the consideration of the list, and made an excellent beginning of a good work, by passing sentence on a pretty large number of sorts which have been extensively tried, and found wanting. In order to give the arraigned culprit the benefit of a doubt, an objection from any member of the Congress was sufficient to prevent his being sentenced; but if no one spoke in his behalf, he was voted unworthy of longer good fellowship in any catalogue, garden, or orchard.

After dispatching this rejected list, which

occupied a whole day, the meeting took up the consideration of varieties worthy of being added to the list for general cultivation. Many and interesting were the discussions elicited by this part of the proceedings; and we will venture to say that more information, regarding the merits of various sorts of fruit—information which had for years before laid dormant in local experience—was made common property by these discussions, than it would have been possible to acquire in a hundred years, by the widest experience of any one individual.

We must not omit to mention the display of fruit, which filled, to overflowing, the tables in the hall. Every member went to the convention with the feeling that, in such a season, there could be no show of fruit, yet hoping, by the specimens he carried, to give some little interest to the session; and every one, on the morning of the second day, was astonished at the extent and variety of the exhibition—certainly much the largest and most varied pomological show in the country this season. We regret that our want of space this month obliges us to refer to the Report of the proceedings for the list of varieties and names of contributors.

Not the least important part of the business performed, was the adoption of concise by-laws for the government of the association; and a most valuable feature embraced by them, is the formation of a new GENERAL FRUIT COMMITTEE for the whole country. This committee consists of the chairmen of the fruit committee of every horticultural and pomological society in the United States and Canada, who are henceforth to be considered as composing it,—all under the direction of the chairman of the whole, appointed by the Pomological Congress. This arrangement, based upon the belief that each horticultural society puts its best men at the head of its fruit committee, (as it is for its own reputation bound to do,) gives the Congress a *perpetual fruit committee*, which embodies the most active talent and information in the country. We shall look to this committee with confidence, as one fully able and willing to collect and make known everything on the subject of fruits and fruit culture within its farthest reach; so that the budget of the next session shall be one unusually rich in valuable information.

We must refer our readers for further details, and for the reports of the state committees, to the printed Report, which will soon be published. We will only add the list of fruits adopted and rejected, for the benefit of cultivators, who may wish to make immediate use of it.

LIST OF FRUITS FOR GENERAL CULTIVATION.

PEARS.

Rostiezer,
Andrews,
Fondante d'Automne,
Fulton,
Urbaniste,
Vicar of Winkfield,
Uvedale's St. Germain, or Pound,
Louise Bonne de Jersey,
Uvedale's St. Germain, *for baking*.

APPLES.

Swaar,
Porter,
Fameuse,
Vandevere,
Hubbardston Nonsuch,
Danvers Winter Sweet,
Bullock's Pippin,
White Seek-no-further,
Winesap,
Lady Apple,
Wine Apple,
Red Astrachan.

APRICOTS.

Large Early,
Breda,
Moorpark.

NECTARINES.

Downton,
Elruge,
Early Violet.

GRAPES,

(*for culture under glass.*)

Black Hamburgh,
Black Prince,
Black Frontignan,
Grizzly Frontignan,
White Frontignan,
White Muscat of Alexandria,
Chasselas of Fontainbleau.

(*for open culture.*)

Isabella,
Catawba.

CURRANTS.

Red Dutch,
White Dutch,
Black Naples,
May's Victoria,
White Grape.

GOOSEBERRIES.

Houghton's Seedling,
Woodward's Whitesmith,
Crown Bob,
Red Champagne,
Warrington,
Laurel,
Ironmonger,
Early Sulphur,
Green Gage,
Green Walnut.

RASPBERRIES.

Red Antwerp, Fastolff,
Knevett's Giant, Yellow Antwerp.

STRAWBERRIES.

Large Early Scarlet, Hovey's Seedling.*
Boston Pine,

The following list was adopted by the convention as new varieties, which "give promise of being worthy of being added to the list for general cultivation:"

PLUMS.

River's Favorite, McLaughlin.
St. Martin's Quetsche,

PEARS.

Beurre d'Anjou, Paradise d'Automne,
Doyenne Boussock, Van Assene,
Manning's Elizabeth, Jalouise de Fontenay Vendee,
Doyenne d'Ete, Chancellor,
Striped Madeleine, Ananas d'Ete,
Duchess d'Orleans, Brandywine,
Pratt, Ott.

STRAWBERRIES.

Burr's New Pine, Jenny's Seedling.

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* We also repeat here the list adopted for general cultivation last year:

APPLES.

Early Harvest, Rhode Island Greening,
Large Yellow Bough, Baldwin,
American Summer Pearmain, Roxbury Russet,
Summer Rose, *And, for particular localities,—*
Early Strawberry, Yellow Bellefleur,
Gravenstein, Esopus Spitzenberg,
Fall Pippin, Newtown Pippin.

PEARS.

Madeleine, Seckel,
Dearborn's Seedling, Flemish Beauty,
Bloodgood, Beurre Bosc,
Tyson, Winter Nelis,
Golden Beurre of Bilboa, Beurre d'Aremberg,
Bartlett. *And, for particular localities,—*
Williams's Bon Chretien, or Bartlett, White Doyenne,
Gray Doyenne.

PEACHES.

Grosse Mignonne, Cooledge's Favorite,
George IV. Bergen's Yellow,
Early York, *serrated*, Crawford's Late,
Large Early York, *And, for particular localities,—*
Morris White, Heath Cling.
Oldmixon Freestone,

PLUMS.

Jefferson, Coe's Golden Drop,
Green Gage, Frost Gage,
Washington, Purple Gage,
Purple Favorite, *And, for particular localities,—*
Bleecker Gage, Imperial Gage.

CHERRIES.

May Duke, Knight's Early Black,
Black Tartarian, Downer's Late,
Black Eagle, Elton,
Bigarreau, Downton.

RASPBERRY.

Knevett's Giant.

GRAPE.

Diana, (native.)

LIST OF REJECTED FRUITS.

APPLES.

Gloucester White, Large Red Sweeting,
Henry's Weeping Pippin, Red Doctor,
Gray House, Grand Sachem,
Red Ingestrie, Beachamnull's,
White Ingestrie, Cathead,
Lord Nelson, (Kirke's,) Caroline, (English,)
Marmalade Pippin, Dodge's Early Red,
Rowland's Red Streak, Fenouillet Rouge.
Woolston's Red Sweet, French Gray Reinnette,
Woolston's White Sweet, Muscovia,
Golden Reinnette, Irish Peach,
Pennock, Pigeonette,
Hoary Morning, Salina.

PEARS.

Croft Castle. Green Sugar,
Alexander of Russia, Gros Blangart,
Admiral, Green Chisel,
Aston Town, Hays,
Autumn Bergamot, Hathorne's Seedling,
D'Amour, Horticulture,
Angers, Hastivea,
Beurre d'Angleterre, Ipswich Holland,
Beurre Sentin, Jargonelle.(of the French)
Beurre of Boswiller, Kramelsbirne,
Bon Chretien d'Esperen, Lincoln,
Bon Chretien of Brussells, Louis of Bologna,
Bergamotte Sylvange, Lederbirne,
Bergamotte Fortunee, Louis Bonne,
Beauty of Winter, Lansac,
Belmont, Madam Vert,
Bezi Vaet, Millar's Seedling,
Bruno de Bosco, Marquis,
Biangent à longue guene, Marcelis,
Bingo Master, Navez,
Cuvelier, Orange,
Chat Grille, Orange Tulippe,
Chain a Dame, Phillips,
Charles Van Mons, Pittfow,
Cassolette, Platt's Bergamot,
Compte de Fresnel, Passe Long Bras,
Copea, Prince sPortugal,
Caillat Rosat, Pope's Scarlet Major,
Clara, Pitt's Marie Louise,
Clapp, Royal d'Hiver,
Citron de Sierens, Rouse Lench,
Dearborn of Van Mons, Rousselett St. Vincent,
Downton, Sans Pepins,
Duquesne d'Ete, Swan's Egg,
Doyenne Mons, Surpass Meuris,
Deschamps' New Late, Saint Bruno,
Dunbarton, Swiss Bergamot,
Doyenne Diere, Sousreine,
Endicott, Sickler, [shire,
Elton, Thompson of N. Hamp-
Frederic of Prussia, Tucker's Seedling,
Famenga, Trubserherdz Dulle,
Forme Urbaniste, Whitfield,
Fantasie Van Mons, Winter Orange,
Forme des Delicas, Wurtzer d'Automne,
French Iron, Yutle,
Green Zair, Crassane,
Grise Bonne, Winter Crassane,
Garnstone, Citron of Bohemia,
Green Catharine, Madotte.

CRITIQUE ON THE SEPTEMBER HORTICULTURIST.

BY JEFFREYS, NEW-YORK.

THE LEADER—*Cockneyism in the Country.*—It is related of BEAU BRUMMEL that, dining with a lady in the country, when asked by her if he ate vegetables, answered, with his usual nonchalance, that he recollected of once having eaten a pea! And BRUMMEL was no bad type of his class in our day, who affect great taste in rural matters, to the merits of which they are as much strangers as their great prototype professed he was to the vegetable. In fact, it is one of the grievances of the time, that, in the neighborhood of our large cities and towns, the most wanton abuse of correct taste, and senseless squander of money, is perpetrated by many who affect country life, in the planning and erection of their dwellings, and the disposition of their grounds. Nor do we see a ready cure for all this mischief, so long as so many "fancy" architects, who know nothing of the true requirements of country life in a dwelling, are deluging the land with their absurd gimcracks, under the names of designs for cottage *ornees*, villas, and the like; and while those who want the buildings will submit to their exactions.

In the amusing and witty papers of "Salmagundi," the sage LINKUM FIDELIUS is quoted for the definition of a word, thus: "Style is—style;" and such definition may most aptly apply to the multitude of models now extant for country houses, without any further reason for their outrè appearance than that—it's the "style." Of what style they are, it would puzzle a "Philadelphia lawyer" to tell; for they might be worshipped by any one without profanation,—being in "the likeness" of nothing ever heard, seen, or dreamed of. We may infer from the lamentations of ancient Solomon, that in his "vanity of vanities" he had encountered the fantastic ebullition of his Israelites—a row of cottage *ornees*.

But seriously, is this absurdity always to continue? Have we no leading mind in America, who can guide the public taste into the construction of proper and convenient houses, mansions, or villas, if you please, in a style that shall comport with the condition, circumstances, and requirements of the American people? If not, the sooner some one of the right spirit can set himself about it, the better. He would be truly a benefactor to his countrymen. There are several styles of architecture, suited to the different localities and climates of North America, all proper and right in themselves, which would beautifully comport with true taste, and the entire convenience of the occupant, and yet be economical, and in keeping with everything around them. To an American, about to build in the country, it is a consideration of some importance to know, that after erecting his dwelling, it is three to one that not a child of his own will occupy it for twenty years after him; and that if any considerable amount of extraordinary expense is incurred in its construction, such expense will be a dead loss to those who succeed him; or, as is much oftener the case, to himself, when disposed of. This is a country not of entails, but of change,—of division of estates; and more particularly in fancy property,—as country seats, and residences of city people usually are—they change hands almost as often as stocks, and articles of merchandise. Consequently

it is the height of folly to lavish such extent of thousands, as is often done, to fit up a country residence for but a few months in the year; or, if intended to be permanent, for but a few brief years at the farthest. You may count, within your own knowledge, scores of country establishments which have changed hands a dozen times within the last thirty years; and perhaps each one of them have cost, as they passed through the alterations and *improvements* of their different owners, in the aggregate, three, four, or five times the amount they would now sell for; and the land to which they are attached, after all, only in decent condition for farming purposes.

Country residence, with many, is but another sort of fashionable dissipation; and the style and arrangement of their houses and furniture is settled with about the same system and knowledge, on the part of the occupant, as he would exercise in the selection of his chariotee, or his tilbury. What wonder, then, that the ephemeral kickshaw should grow tiresome, and be tossed off his hands as inconsiderately as it was purchased, or built; the loss—as it is sure to be—mutteringly pocketed, and "country life" condemned as a humbug!

This is all wrong. You cannot do better than to expose the ridiculous propensity now so prone to introduce a false taste into country life. The good sense of the public is with you, and I beg you will persevere until a thorough reform is effected. More of this anon.

On Root Grafting, &c.—Mr. Hooker is perfectly right in his views on this subject; and any one who will examine the beautiful and thrifty nurseries of western New-York, where this system is generally practiced, will acknowledge its superiority.

Horticultural Suggestions, &c.—This article, from Professor Turner, is in the right vein. The *practical* experience of cultivators is what we require for our improvement; and unless we know both sides of the story, we are sadly apt to baulk in our progress. There are phenomena, and latent elements in the climate and soils of the broad west, that require different treatment in the cultivation of many of their fruits, which do not exist in the older and less *naturally* fertile states. Acclimation will be one of the chief preventives to the soils now so much complained of by cultivators in such localities; and it is to such as Professor Turner, that we must look to experiment upon, and ascertain the proper kinds of fruits for culture, and the best methods of treating them. I hope he will continue his useful "Suggestions."

Iron Roofed Vinery.—"There's nothing like leather," said the currier, in the fable, when the different mechanics were called in council, to advise the strongest mode of fortifying the town, after the mason had recommended stone, and the carpenter had suggested wooden walls, for the purpose.

It is here quite as natural that an iron-founder should build his vinery of iron, and recommend it to others; and I like the enterprise of his experiment right well, too. I should like to hear from Mr. Resorr five years hence, when the frosts, and the damps, and the shrinks, and the swells, and the lightnings and electricities of all sorts, have played their pranks around it, as they will be sure to do. Iron is yet to be—when it can be made cheap enough—introduced into a great many structures that we hardly yet dream of; and if the same advantages can be had in the construction of conservatories, vineries, and hot-houses, with iron, as with wood, its durability will prove its greater merit. Mr. Resorr's plan is at least ingenious, and I trust it will be successful. He is entitled

to the thanks of all interested for his instructive paper.

Rural Churches.—"How reverend, how beautiful is the sanctuary of God!" is the involuntary sentiment, either felt or uttered, which the country church should draw from the heart of the beholder, as he first looks upon it. Nothing in the world so deeply impresses the feelings of the man of true taste and refinement, as an appropriate rural church, in its "Sabbath stillness," nestled among the accessories of tree and shrubbery, with which it should be environed. The austere habits of the Puritans, who first settled our northern states, carried their practice as thoroughly into their church architecture,—which was, in fact, no architecture at all, but an entire absence of it,—as into their domestic life; and amid their poverty and privations, they constructed their "meeting-houses" with as little regard to good taste and convenience, as is now seen in the receptacle of a "Quaker meeting." But, thanks to our latter day prosperity, and an improved taste, our northern cities, towns, and villages, as well as many of our rural neighborhoods, are becoming embellished with choice gems of architecture, in this soul subduing and heart elevating element of our present stay and our future hope—the house of worship. If there be anything in this world erected by the hand of man, that should breathe an air of tranquility, of repose, of entire removal of the heart and affections, for the time, from the empty pageantry of sensual objects, it should be the temple of the Most High. Yet, among the many beautiful, imposing, and appropriate structures, to which every succeeding year is giving birth, there is often too much of tinsel, and glitter, and an effort at display, but poorly comporting with the spirit of devotion and humility, of which the church should be the symbol. A *fashion*, and a spirit of rivalry, is becoming too prevalent with many on this subject, which should be corrected.

Dignity, devotion, solemnity, should be the aspect of a country church; and in its architecture, whether massive or florid—and the less of the latter the better—the prevailing characteristic should be that of *expression* of the true spirit for which it is erected.

The perspective of Dr. MUHLENBERG's church, in your frontispiece, is a model in its way, although the absence of "the taper spire that points to heaven," from its massive tower, is a drawback to its general effect; more particularly when "bosomed high in tufted trees," amid the rural landscape, as all country churches should be. I hope to see many other models of the kind in your pages.

The History of the Growth of a Tree.—Excellent. No man can be an accomplished arborist who does not early familiarise himself with this most important subject. It should be studied well by every cultivator.

Something about Fruit Conventions.—Cobbett-like, our "Old Digger" is out upon "all the gentlemen;" and they probably pretty well deserve it. As the "North American" convention is probably going off about this time at Syracuse, and the "Congress" is to come off next month in New-York, out of the two, which we cannot but hope will then be united on fair and equitable terms, we trust the public are to be benefitted. Let us have *all* the story—both sides, and butt, and little end to-boot; and we shall sift out the truth. In all matters of investigation, nothing so stimulates inquiry as a little disputation; especially where the merits of the subject matter only are concerned; and personality

and private interest is avoided. And what business have either of these in pomological discussions? Have your eye open, friend "Digger," and keep any belligerent spirit, if you detect it, in due subjection.

Paving, a Non-preventive.—Mr. CLEVELAND's article well demonstrates that no rule works without an exception. I am right glad he has sent you this—his experience. Curculios are queer things,—that's certain; and I know of no other way but to persevere in trial, and let the public know through your pages the result, *pro* and *con.*

Low Headed Fruit Trees, &c.—Your "New Subscriber" has many sensible thoughts, and some queer conceits withal. But I cannot believe, that because he does not remember all the "extraordinary drouths," and changeable seasons, we have had in the last forty years, that the world is either about to turn topsy-turvy, or that the laws of vegetation, gravity, or electricity, are either already, or about to be changed. Telegraph wires and rail-roads have about as much to do with the weather, as "the man in the moon." Speculation is all very well when based on true principles, but mighty mischievous when running at random. Try an experiment with your vegetation, my dear sir, by the side of your telegraph wires and rail-road tracks, as well as ten or twenty miles away from them; and then, if you can convince us that they *do* affect vegetation in "blight," and "rust," and "rot," we'll talk further about it.

Descriptive Notes of New Strawberries.—I like always to hear from Mr. WILDER. One who, like him, goes into the very bowels of a subject, is apt to obtain results; and when he gives them to us, they are valuable. What we "outside barbarians" want, is correct information, given by *distinguished*, intelligent men. There are so many "seedlings," originated by pomologists now-a-days, every one of whom is apt to think his own bantling a prodigy, that it is no wonder we have various worthless fruits palmed off upon us, and innocently too, perhaps, in some cases. Climate, soil, and treatment, have so much to do with these matters that nothing short of some years of time and experience will test the virtue of new varieties; and these should be sifted out thoroughly before the world is deluged with them, and the money of the million squandered in their cultivation.

Pomological Nomenclature.—Capital. Our Syracuse friend—why don't he write his name in full?—has hit the thing at once. We need, and *must* have a *reform* in the names of our fruits. What is the use of holding on to a catalogue of names,—well enough they may be to those where they originated,—but as unintelligible, and unpronounceable to nine-tenths of us in America, as to a Hindoo? Scarce a day but my ears are grated by the Anglicised pronunciation of these French and Belgian names,—making them absolute absurdities.

Your suggestion, that the foreign terms be rendered into English, is a good one, and I hope in the next edition of your "Fruits and Fruit Trees," you will do so. If the pomological conventions will take the matter in hand, they could scarcely do a wiser thing.

A Beginner's Troubles.—Our friend must study well his soil, position, and all the accesssories to his labors, before he adopts unhesitatingly the rules laid down by any *one* pomologist, or any *one* cultivator. Learned as he may be, he will find something new every year of his life. *Chiefly* must he study his *soils*, and his *climate.*

I have known fruits which were very fair immediately around the spot where they originated, almost worthless when planted but a few miles away on other soil, and in other exposures. Few fruits in the world are of *general* adaptation.

As for "Giant Asparagus," it will grow anywhere with *rich* soil and *deep* culture, no matter where you get the seed, or the roots. I have gone through all *that* story. But J. is one that *will* succeed. No one so willing to inquire as he is, will fail in arriving at the best way of doing all these things, by-and-by.

Mulching Gooseberries.—No doubt of it. "It's according to nature;" and if a thousand other things were mulched besides, instead of exposed to the scorching rays of a summer sun, in a hard, dry soil, it would be all the better.

REMARKS ON THE DISEASES OF THE PEACH, PLUM, AND CHERRY TREE.

BY H. J. EHLERS, BARRYTOWN, N. Y.

Whoever has observed, with attention, the growth of fruit trees in this country, must frequently have seen with surprise the peach and plum tree struck with disease, and dying early, while other fruit trees appear in a sound condition, and live to a great age. The cherry tree, also, seems to be less healthy in this country than in Europe.

This fact justifies the suspicion, that these trees contain in themselves properties not to be found in such as remain healthy; and it is known that they differ from all others, in the abundance of a substance called *gum*. Let us now inquire whether we can trace any connection between the existence of this substance and the predisposition to disease?

In the healthy tree, gum is found mixed with the sap in a dissolved state; when the tree is in a diseased condition, gum is secreted, and driven to the surface as a transparent, adhesive substance. In its normal state (dissolved in the sap,) it exists only in the bark; that is to say, in those vessels through which the sap, elaborated by the leaves, descends to form a new growth of wood. Gum is soluble in water, and its greater or less degree of fluidity will depend on the quantity of water employed in its solution. By the simple process of evaporation, it can be reproduced in concrete form; and is, therefore, in a high degree qualified to pass through the various stages of fluidity, under the reciprocal actions of heat and moisture. The health of a tree depends on the free circulation of the sap; and if this circulation be *at all impeded*, the tree becomes *diseased*, and, if not relieved, death ensues.

May it not, therefore, be believed that the diseases of the peach, plum and cherry arise from impeded circulation, since they are, in this country, invariably accompanied by bursting or rupture of the bark? And may it not be inferred, that this impeded circulation is caused by *gum*, when we remember the qualities of this substance, and how it may be acted upon by the excessive heats of the American summer? The influence of the sun-beams, when the air is clear, is very powerful, and must necessarily cause an evaporation more or less rapid in proportion as the heat is increased or diminished. In those parts of the tree which are exposed to the sun, the juices

are drawn forth, and the gum, becoming less fluid, moves more slowly, and gradually accumulates in, and obstructs the natural passages; while, in other parts, the tree being subjected to more genial heat, a *more* active circulation is maintained. The consequence of which is an expansion, and at last a bursting of the vessels through which the sap flows, at those points where the obstruction exists; and then ensue warts, or knobs, or an effusion of sap, and eruptions of gum. Though this is only theory, and needs to be verified by actual experiment and chemical research, yet it derives support from the practice of many gardeners. It has been stated on sufficient authority that *salt*, applied to the soil about a plum tree, will prevent the black wart. If our argument be correct, the result of the action of salt is obvious enough: the tree receives in its system a solution of salt, which, by its nature, attracts moisture, (or gives greater fluidity to the sap,) and communicates it to the gum; thus preventing the concretion that would check circulation. The cause of the disease (excessive heat,) is not removed by the application of salt; but it acts as an indirect remedy; it alters the secretions of the tree, so that the same cause does not produce the same effect.

We are aware, that plants brought into a condition contrary to their nature lose, to some extent, their vital powers; and that, in consequence, a formation of slime-sugar (saccharum mucosum) takes place. It always follows a great decrease of phlegm, (principium mucosum,) which last substance abundantly exists in peach, plum, and cherry trees. In the capacity of the plant to produce slime-sugar at the approach, or, rather, in a certain stage of disease, we see how nature provides the means of accomplishing her ends, since the reduction of the plant to dust (its last destination, in the usual order of things,) is brought about by decay, and the first step towards decay is fermentation. Nature, then, has recourse to that powerful principle of fermentation—slime-sugar—to begin fermentation, and that the taste and odor of this substance will summon to its aid those additional agents of destruction,—insects. When, therefore, we perceive, on diseased fruit trees, swarms of insects, let us not confound the effect with the cause, but rather attribute their presence to the disease, than the disease to their presence. H. J. Ehlers,

Landscape Gardener.

Barrytown, N. Y., Oct., 1849.

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[The foregoing suggestions are quite new to us, and come from one of the most intelligent German gardeners in the country. They appear to us to be worthy of the serious attention of our physiological readers, interested in the diseases of stone-fruit trees. Ed.]

FOREIGN NOTICES.

Green-house and Window Gardening.—*Housing*.—Nurserymen in all parts of the kingdom are now busy among their young stock preparing for "housing" it, by which term they describe putting plants under glass. You may see rows of men at this work in every great nursery, and there the division of labor is carried out to a great extent. The first person takes up the pot, raps the edge of it on something solid—sometimes on his own knee, or against the point of his shoe, or, what is not a bad contrivance, against the tread, or shoulder, of the blade of a spade stuck firmly in the ground beside him for the purpose. This first move is, or should be, done rapidly, and is intended to look out for worms which may have got access to the pot, and if they got the least warning of approaching danger you lose sight of them for that day. The next move is to see that the drainage is perfect, and a little adjustment of the crocks, if needs be, will soon put that right.

Then the pot is passed to a second person, who, with an old knife or a flat piece of stick, removes any dirt or moss, weeds, &c., from the surface; therefore this division of the occupation is called "surfacing." The pot is then handed on to a third person, to be cleaned with a wisp of dry hay or straw, or with a cloth, or, if very dirty, with a scrubbing-brush and water. This last, though the most drudging part, must be put into careful hands, as an unaccustomed workman might destroy a valuable collection by the mere simple process of washing the outside of the pots, so that my readers who are nursing on a smaller scale had better see to this important point. The water in the tub must soon get very black and nasty from the slime and dirt scrubbed off the pots, and if this is allowed to soak the earth inside the pot it will glue the whole together, so that the plants will not seem to want for water for many days; and when it is given them it will hardly pass into the soil at all, but must run down by the sides; therefore it should be made conditional with him, or her, who washes flower-pots in the autumn, or, indeed, at any time, that none of the water touches the soil, not even if the inside of the rim of the pot is green and must be washed. After that, the old stakes, if any, should all be tested, to ascertain if they are still sound and in their proper places; but, if the plants are intended for a green-house or window, this part may be left undone; and also new or proper labels need not be provided till the first bad weather will stop out-door work. It would also give a neat finish to the whole if a slight covering of fresh soil were put over that in each of the pots, first seeing that the old soil is uniformly moist, and then, with a fine rose, to give a slight shower over the foliage, earth, pots, and all. If the stages, glass, paths, &c., are clean and dry, and you allow the plants to get dry also after this preparation, there is no reason why they should not do very well for a long time; and the only other point which occurs to me at present is this, that, as soon as plants are "housed," the watering should henceforth, for the winter season, be done early in the day and never in the afternoon, for reasons which must be plain enough to any one who has hitherto read THE COTTAGE GARDENER. Another very wise plan at this season would be to look out all green-house or half-hardy plants that have been growing out of pots in the open garden, and such of them as are intended to be potted again, or even to be taken up to shelter from the frost, and to be secured in sheds or cellars, should now have their roots gradually prepared for the change, as I have remarked on some weeks since, by cutting a portion right through with a spade. Besides the advantage of making more sure at the time of taking up such plants, their growth in the mean time is checked, therefore they will ripen the young wood better; and, if they are late flowering plants, such as Scarlet Geraniums (they are not Pelargoniums, at any rate,) and the soil is rich and damp, they will now make more leaves and shoots than flowers, but by a little curtailment at the roots this disposition is reversed. In the case of half-hardy shrubs in the open borders, which are to be potted or even protected where they stand, a little cutting of the roots would now be very useful to them, and also a regular pruning all over the branches, cutting back the softest part of the tops. Seedlings of these plants, when turned out in the open soil, have a natural disposition to ramble away late in the autumn, and if this is not checked in time no one can keep them over the winter.

Scarlet Geraniums are often taken up, carefully potted, and put in the shade for a week or ten days, about the end of this month, and when they do well that way continue their bloom for some time, and are very useful in the green-house. This cutting off the roots previously to their removal would almost insure success. I have heard of people putting these and similar plants into a close hot-house as soon as they were potted from the borders, to make them root the faster, as they said; but the truth is, although they may root freely enough, the sudden shifting will assuredly injure their bloom for the rest of the season. Every one regrets the loss of favorite specimens, which grow too large or cannot well be removed after they are once planted out; but with a preparatory cutting of their roots and top branches they may be preserved for years.

A section of the Scarlet Geranium called *Nosegays* will bear a smart forcing in February and March, if they are now properly prepared, so as to be ready for their flowering pots by the end of October. Plants of them two years old answer best for forcing, but any healthy plants of them now growing in the borders may be so managed as to come into bloom before the middle of April with a little spring forcing. The roots are not to be cut at this stage; but all their side branches and their leaders must be cut close, not leaving more than a couple of eyes on any of them. As the Nosegays are a tall, long-jointed race, and without close pruning you can do little good with them, in a week or ten days after they are thus cut a host of young branches will spring up from all parts of the stems if the plants are old, and as soon as their leaves are about the size of a shilling is the proper time to remove them from the border to be potted, and the process is only a repetition of that to tall Pelargoniums. Their roots are shortened, so that at first potting they may be put into small pots, and kept close for a while to encourage new roots. This close forcing, which I have just condemned in the case of large plants with their full complement of leaves, roots, and flower buds, is highly beneficial when all these are either in a great measure wanting or in a crippled state. As soon as the first pots are full of roots the plants are repotted into larger ones, but at that late season only one size larger;

and the third shift, if not the second, should be their flowering pots; but that depends on the size of the plants, and the facility with which they will rest. They should be kept at green-house temperature close to the glass, and be regularly watered through the winter. Early in February let them be brought into a forcing pit, but a good hot kitchen window would answer the purpose, provided that the plants were wintered in a cold pit.

Frequent Repotting.—None of us have yet explained why it is that gardeners do not put such plants into their flowering pots at once, and so get rid of the trouble of frequent pottings, but here it is at last. If we were to put a Pelargonium into a full-sized pot after its roots were shortened, the young roots would all work out to the sides of the pot, and then coil round and round in the usual way, so that, whatever the size of the pot and ball might be, the roots are feeding in a great measure only on the outside of the ball; whereas, by the use of small pots and progressive shifts, the roots must be at work in all parts of the soil. Country readers will understand this better when I say that folding sheep on turnips is like planting in the small pots; and both the fold and the small pot are shifted as soon as their respective contents are appropriated. Yet the farmer's sheep and the gardener's plants would get on very well without folds or small pots, but it would be wasteful in both instances; yet, for all that, you see at lambing time the shepherd allows some of his pet ewes to roam over a whole turnip field at will, and the gardener does the same with pet plants by what he calls a *one-shift system*. Many plants, however, cannot stand such good feeding; they soon take a surfeit.

Forcing Bulbs.—The earliest of this class is the *Double Roman Narcissus*, and, very fortunately, it is the easiest to manage of the family. Any light soil will do to grow it in, and the usual way is to put three bulbs into a 6-inch pot, or two in a 5-inch pot, and a dozen of such bulbs may be had for three or four shillings. After potting, give a good watering and set the pots in some out-of-the-way place, *where the heat of the sun cannot reach to stimulate the bulbs to make leaves before they have made roots*, for that is the grand secret in forcing all kinds of bulbs. The pots should be at the least half filled with roots before you can see the bud of leaves, so to speak, in the centre of the bulbs. This Double Roman Narcissus is a famous one to root fast; therefore, as soon as you see the roots working down freely into the mould in the pot, you may take the pots to a kitchen window, if no better convenience is at hand. Indeed, I know of no better place in which to force these hardy bulbs than a good kitchen window facing the sun. If their leaves grow too fast or weakly, you can lift the bottom sash and turn them outside in the middle of the day, and there is always warm water ready for them. The air is also dry about them and in constant motion; for the draught of the chimney sucks up the air continually, so that fresh air is constantly pouring into a good kitchen. Fresh air is just as useful to plants as it is to cooks and kitchen maids; and if ever you see plants or maids look pale and languid in a kitchen, depend on it the fault is more in the want of ventilation than in anything else.

The next earliest bulbs are the single and double *Van Thol Tulip*. The usual way to plant them is to put five of them in a 6-inch pot, or what used to be called 32's, and three into a 5-inch pot.

There are three more of the Narcissus family very good for forcing, but not nearly so early as the Double Roman; these are called *Soliel d'Or*, *Stadtles General*, and *Grand Monarque*. These are the best; but there is hardly an end to the number of Narcissi, and they might all be grown in pots. Then of *Tulips*, besides the Van Thol, there are Claremond, Golden Standard, and Royal Standard, three of the best and second earliest with Rex rubrorum, Marriage de ma Fille, and Turnsol; these of the later sorts are very good for forcing. There are scores of other sorts, I dare say, just as good; but the above are the cream of all that I have tried myself, and I recollect having tried 42 sorts one year. There is a little yellow Tulip with a drooping flower, called the *Florentine Tulip*, and some people are very fond of it for forcing, as it is rather sweet.

The double and single *Jonquils* are also easily forced, and all the *Hyacinths* will force, either in soil, moss, or water. It is true that the dealers recommend such-and-such sorts as being best for either way, but I could never make out any difference in any of them. If the bulbs are strong and healthy, and the roots get well forward before the leaves begin to grow, I believe any Hyacinth will do well enough either in water, moss, or in soil; but I prefer moss, as the least liable to get out of order. Water is the most damaging to the bulbs, and soil may get too dry, or too damp, or mouldy, or the drainage may get stopped, and many other unlooked-for difficulties besides may occur to it, but moss is free from such impediments. Like a sponge, it holds enough water and no more, the roots run through it in all directions, and at last crowd at the bottom of the pot where the moss is beginning to rot, and no doubt they feed on it in that state. The different bulb-growers in Holland give different names to their seedling bulbs, although they may be the same variety; this is often unavoidable, but it is very puzzling when you come to make a selection. *D. Beaton. Cottage Gardener.*

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MANNA—MIRACULOUS FALL OF FOOD FROM HEAVEN.—Two months ago a report was current in Erzeroom that a miraculous fall of an edible substance had occurred near Byazid; but as the simplest facts are often greatly distorted and exaggerated in this country, and the most unblushing falsehoods circulated, in connection with anything

of unusual occurrence, the European residents here were not inclined to listen credulously to the accounts of this "wonderful fall of bread from heaven." The report, however, instead of being soon forgotten, gained daily more ground; specimens of the substance were brought hither, and travellers from Byazid bore testimony to the fact of several showers of these lichens having taken place. Finding that there was some foundation for this phenomenon, I thought that the matter was deserving of investigation, and that you would be interested in knowing it. I therefore applied to Dr. Heinig, the sanitary physician at Byazid (the only European residing there,) to furnish me with information, which I elicited by means of a series of questions. It is the result of these inquiries which I now have the pleasure of submitting to your notice.

About the 18th or 20th April last, at a period when there had been, for a whole fortnight, very rainy weather, with strong winds from the S.E. and E.S.E., the attention of the shepherds and villagers frequenting the country near Byazid was attracted by the sudden appearance, in several localities, of a species of lichen scattered in considerable quantities over certain tracts, measuring from five to ten miles each in circumference. Dr. Heinig describes two of these spots as follows: One is situated three miles east of Byazid, behind a range of rocky mountains stretching from the north, gradually towards the south-east. The other is five miles to the south of Byazid, near a similar range of rocks, running in the above-named direction.

It is remarkable that no one had ever before observed these lichens in the neighborhood, not even the shepherds, who often pasture their flocks on the crags and in almost inaccessible places; and Dr. Heinig, who has been on Mount Ararat (which is close to Byazid,) and who appears to have a taste for rambling over mountains, says he has never met with any. What seems to confirm the assertion that these products were not known previous to their unaccountable appearance is, that last year the crops were greatly injured by locusts, and a famine threatened; and had the substance been known to exist anywhere in the vicinity, it would most assuredly been eagerly sought after and collected last autumn, when the price of wheat had risen to more than double its usual value. A similar phenomenon is said to have occurred at Byazid some years ago, when it is probable that the edible quality of these lichens became known to the natives; unless showers took place previous to that period, which I have not been able to ascertain. Supposing the lichens to have been blown off some adjoining inaccessible places, and in such great quantities, too, how is the rarity of the occurrence accounted for? and how is it that they covered such large tracts of country?

No proof has been adduced of any one having seen the fungi fall; but as the first intelligence was brought by villagers who, early one morning, had observed the lichens strewed over a tract of ground where they had not observed any on the evening before, it is probable that the showers must have taken place during the night. In some localities, the one or the other kind of lichen alone was found; in others, the two species mixed. On the 19th June, another quantity of lichen was discovered, and as the spot was a well-frequented one, it seems likely that the fall had occurred only a few days previously.

From all accounts, the quantities collected have been very great. Dr. Heinig says that a person could collect at the rate of 1¼ lb. in an hour, which, considering the lightness of the product. is a tolerable quantity. The substance is ground up with wheat and made into bread, or eaten simply in its raw natural state. *Erzeroom, July* 2, 1849. [Our correspondent has favored us with specimens of these productions, which we shall take an early opportunity of figuring and reporting on.] *Lindley's Chronicle.*

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Root Pruning.—In our last we adverted to the general policy of root pruning, and promised details adapted to the varied circumstances under which the fruit cultivator is placed, from the suburban town gardener, with his single pole of ground, unto the proprietor of the noble demesne, or even the commercial gardener. The latter class, indeed, so contrives matters in general that he avoids the necessity for much pruning of this kind; his mode of planting is not liable to mischances. In the first place, his soil is of a character that little preparation is necessary; his subsoil also is of a genial character; or, indeed, but for these two points, his profession would not prove by any means of a remunerative character.

It must be understood, therefore, that in writing for the amateur and the cottager, we write with the full impression that they labor under greater difficulties than the before-named parties; neither possessing, in the main, so good a situation, nor so much skill. Thus persuaded, then, we will proceed.

Root pruning, as at present practiced, may be thrown into two divisions, viz., periodical root pruning by system, and root pruning through necessity. The first has been called into notice by Mr. Rivers, of Sawbridgeworth, the eminent nurseryman, who, indeed, as we think, may be considered the originator of the system, or, at least, its greatest advocate. Of the other, root pruning through necessity, we must at once be egotistic enough to claim the merit—if merit it be—of keeping the subject warm, and of continually bringing it before the public for the last twenty years. The first kind we have never practiced, and can say little about; we, however, apprehend it is not generally needed by, or adapted to, the majority of our readers, who rather, it may be presumed, aim at off-hand plans less tedious in character.

By *root pruning through necessity*, then, we

merely mean the inducing a fruitful habit in fruit trees which are of too gross a character; such may arise from other causes than mere richness of soil. An apple, naturally of rampant growth, may, by being grafted on a stock of great powers (or, rather, of strong vital action and capacious sap vessels,) prove too gross even on soils of moderate fertility; whilst one of delicate habit, grafted on a weak or imperfect stock, may prove too weak even to make sufficient young shoots on the most powerful soils. The question of stocks for grafting is a very broad one, and too broad and too digressive in character to discuss now: it will receive attention in due time. To proceed: the same remarks apply to all other fruits, and, after all that has been said, written, or practiced, we are persuaded that these things are as yet in their infancy. There is, perhaps, more room for real progress in fruit culture than in any other branch of gardening; and it is to be anticipated (according to the common order of things) that the writer of the fruit article in THE COTTAGE GARDENER of half a century hence will smile heartily at our present lucubrations. So be it; we are but links in a chain of which that very learned personage above alluded to will, no doubt, consider himself as the terminating one.

As preliminary remarks, it may be observed that it is not very convenient to the classes to whom we offer advice to take up and replant a select lot of fruit trees which have been planted some four or five years, and which, instead of producing the owner abundance of fruit, have produced nothing but twigs. Cases like this, therefore, call for a plan which will cause but a small amount of labor, and, at the same time, assuredly give confidence that immediate bearing shall be the result: such, then, is root pruning.

We must now take into consideration the different circumstances under which we find fruit trees; for it is not expedient to apply the same mode to all. The modification of the system is not so much dependent on kind as on circumstance. Those trees which are growing on marginal borders, and which frequently are connected with flower culture, cannot be reached in the excavating process with equal ease on every side. Supposing, however, the flowers, or it may be vegetables, to stand in a line parallel with the walk or line of trees, the roots may be at least reached on two sides—those, we mean, at right angles with the walk, or general line of fruit trees. Here, then, they may be attacked, and our practice has always been to excavate a trench as deep as we can discover the least trace of a fibre: indeed, we generally go deeper (more especially if we think the tree possesses tap roots,) for whilst the trench is open it is comparatively easy to search by degrees beneath the very bole of the tree, and to cut away all those which have penetrated into ungenial soil. We do not lay so much stress on a *precise depth* for the roots to ramble, as on the character of the subsoil; although we do think that wherever *ripening of the wood* becomes a matter of importance, that from half a yard to two feet in depth of a sound soil is better by far than any greater depth.

Tap roots should by all means be removed; but let it be understood that, for the removal of such powerful agents in obtaining food for the tree, an equivalent in degree must be provided. We name this, by the way, in order to prepare the minds of those who are merely in the hornbook of gardening, to expect that such severe operations cannot be practiced with impunity; in fact, that something more than a merely mechanical meddling will be necessary; a little of what is termed "mind" must both precede and follow the operation.

We will suppose, then, a trench or cutting excavated to the depth alluded to, and of a spade's width; every root, of course, in the line of trench cut away: these are severe measures; but fear not—such are necessary at times as well in the vegetable as the animal kingdom. After thus proceeding, a fork or some pointed tool should be used to dislodge a little soil from the surface of the cutting on the side next the tree, in order that the mangled points may be pruned back. This becomes expedient in all cases of root mutilation by blunt tools, because no one can tell but that a gangrenous character may be superinduced, especially in roots of some size (and, of course, age,) such being slow in healing in proportion to their age. Let every point be pruned back with a sharp knife an inch or two, cutting, where possible, back to where a rootlet or bunch of rootlets branch from the root in question.

When the case of grossness is excessive, we have sometimes made a practice of leaving the trench or excavation empty for many weeks; indeed, in the case of strong or adhesive soil, we have at times left it open until May or June, or, in other words, until the drouth of the spring has penetrated the mass. The practice, however, is an unsightly one, and, as there is no *absolute* necessity for it, we lay no particular stress on this proceeding.

In filling up the excavation, advantage should at all times be taken of introducing maiden or fresh soil; and, whenever such materials can be commanded, we advise using rough turfy soil of a loamy or sound character. *Sound* is, indeed, a somewhat indefinite term, and we dare not digress so far here as to enter into a definition of it. We intend shortly to enter into the question of loams and other soils, seizing the period for that purpose when mere calendarial routine is at its lowest point. The economical improvement of the staple of soils is a question affecting, more or less, most of our readers. Much has been written about manures, but little about mechanical texture, the very key-stone of the arch.

If loamy soil cannot be obtained, it is easy to exchange the excavated soil for any fresh ordinary garden soil at hand; and, indeed, the mere kitch-

en-vegetable bed adjoining, if not too rich in manures, may be substituted. Whilst speaking of manures, we may observe that none of any kind may be introduced amongst the soil in filling the excavation: some persons recommend and practice it; we, however, do not like "blowing hot and cold;" we consider the process inconsistent, especially since any amount of vigor may be imparted by surface dressings or by liquid manure.

In concluding this paper, we may remark that it is not material that *all* the sides of a tree should be root pruned equally: either one, two, three, or the whole may be dealt with accordingly as they can be got at. Nevertheless, the smaller the number of sides pruned the more severe the operation must be. We, of course, prefer cutting all round equally (not but that the cutting of any one root on any given side, equally or nearly so, affects the whole system of the tree;) but cutting all round is a more satisfactory mode, as throwing the volume of roots into a more determinate form, and, of course, placing them henceforth under a more definite control. Another argument may be adduced in its favor. In cutting all round there is less occasion for such very severe mutilations; for, be it understood, that although root pruning is of great use under circumstances of over-luxuriance, we must still class it as a necessary evil.

In a subsequent paper we will advert to the different kinds of fruit trees—for all must not be cut alike—and giving rules for cutting as to distance; such being regulated by the amount of over-luxuriance, the age of the tree, the character of the soil, &c., all of which exercise important influences. *R. Errington. Cottage Gardener.*

DOMESTIC NOTICES.

New Seedling Fruits.—*Dear Sir:* Notwithstanding the general opinion among intelligent pomologists, that the varieties of fruits now under cultivation are far too numerous, and the consequent desire among them to expunge from the catalogues, and drive from cultivation such as are invaluable; and too, notwithstanding, nearly every pomological and horticultural society, as well as most state agricultural societies, have adopted pomological rules,—concocted mainly for the guidance of committees, and individuals, as to what should be prerequisite when judging of new seedling varieties, before they are to be deemed worthy of name or recommendation; still, there is scarcely a number of any horticultural journal published, or the proceedings of a horticultural society printed, in which we do not see *new* seedling varieties recommended to cultivators. Can it be that valuable fruits increase so much faster, in this progressive age, than in times gone by? Or, may it not be much more probable that editors and committees—fearing to wound the vanity of originators, or discoverers, of seedlings—are not sufficiently firm in following, rigidly and strictly, the admirable codes of rules, which, if adhered to, are so well calculated to protect planters and growers from imposition and loss? I hope I may be pardoned for interference in this matter; for I feel it very necessary that great circumspection be exercised, and wish to call the attention of those interested to the subject. Yours very truly, *Herman Wendell. Albany, Oct.* 9, 1849.

[Dr. Wendell is quite right in advising more caution in bringing forward seedling fruits. We believe, indeed, that more new seedlings of excellence will be produced in this country in the next twenty years, than have ever been originated before in a century, in any part of the world; but unless fruit committees do their duty, and winnow the grain *fearlessly* from the chaff, our catalogues will be burdened with new sorts, of indifferent quality, faster than pomological conventions can reject the old ones.

If all persons to whom a new variety is submitted will stand by the "Pomological Rules," and adopt nothing that is not at least equal, if not superior, to similar sorts already known, a very large part of the candidates will be found unable to pass the necessary examination, and will therefore have to go without anything more than a local name and reputation. Ed.]

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Moving Large Evergreens.—*Dear Sir:* A very fine fir tree, located in "the front yard," measuring about thirty feet in height, nine inches through one foot from the ground, and perhaps eighteen years old, is either to be chopped down and consigned to "the wood pile," by a close neighbor of mine, or, if saved, saved by "foreign interference."

To prevent such destruction as is threatened of life and limb, I propose, on certain conditions, its removal and salvation.

Now, my obliging Lexicon—if I may so speak—supposing said tree hitherto to have been growing upon a mound of earth eighteen inches high by five feet in diameter, (as this has been,) and raised that much above the surface of the earth around, should you in transplanting recommend continuing it upon the mound, or placing it upon *a level* or nearly so, as in re-setting other trees?

Or, rather, my question is, (for I *prefer* the tree *not* upon a mound,) would that tree be as likely to live, all other things in moving being equal, placed upon a level, according to your rules of transplanting, as it would if placed upon a mound

similar to that to which it has become accustomed by early training?

If it be removed properly—say with a ton of earth, in the winter season, and great care exercised both before and after transplanting, by having soil, compost, "mulching stuff," and, lastly, rocks to keep it in position, and everything right and in order—what think you, shall I "have a rough time of it," or not, in endeavoring to make it "live and let live?"

Also, what compost should you recommend, if any? Respectfully your humble servant, *Milton J. Stone. Boston, September* 25, 1849.

[The tree will thrive *better* for being placed on a level, or, rather, very slightly raised above the general level.

If it is moved in winter, *skilfully*, with a large ball of earth, it will suffer no more than a plant taken from a pot.

The best compost for it will be made by mixing a cart load of the ashes of bituminous coal, and a barrow full of well decomposed manure with the soil. Ed.]

....

Cincinnati Horticultural Society.—*Dear Sir:* The annual fall exhibition of our horticultural society is just brought to a close. A full report of the articles exhibited, with the premiums awarded, will speedily be laid before the public from the appropriate committees. In the meantime, I wish to present a brief description of the hall on this occasion, with the discouragements under which the show was got up, and the hopeful encouragement it presents for future progress in this delightful field. My only regret is, that you were not present to do justice to the subject, and the laudable efforts of individuals throughout the whole exhibition.

The late frosts of last spring seemed to cut off the hopes of the fruit culturist, in a general sweep of the embryo fruit, excepting here and there, in favorite spots; even the apples by no means escaped, or are so good as usual. Next, we were visited by that terrible scourge, the cholera, lingering through the summer with its desolating effects, carrying dismay with it, which left but little time or inclination to think of such *jubilees*, or the preparations for them. Then set in a drouth, so common in this region at this season of the year, of some three or four weeks' duration, which materially crippled the late bloom of Roses, Dahlias, &c. Notwithstanding these discouragements, our commercial and amateur horticulturists have persevered, with a zeal that has called forth the universal praise and admiration of our citizens, who have corresponded to their skill and exertions in a most liberal support, by crowding the hall during the exhibition. This has enabled the society to realise the means to meet its expenses, and pay the liberal premiums awarded to the successful competitors, and is felt to be the sure index of more successful efforts next year. All contributed to the greatest harmony and good will throughout the exhibition, which opened on the 26th, and closed on the evening of the 29th ult. Owing to the causes for doubt, above alluded to, as hanging over the success of the exhibition, the society hesitated in extending invitations to kindred societies and individuals abroad to attend it, least they should be called to participate in the mortification of a failure, which seemed so evident to many.

The best results are to be looked for from this success, under such unfavorable circumstances; as it has shown the ability and capacity of our horticulturists, and created in them a confidence which has never before been *unitedly felt*. From it, I doubt not, we shall date a new *era* in the progress of our operations. It is the first beginning of a liberal scale of premiums; this amount will be largely increased for next year, with a full hope that we shall be enabled to add to it from year to year, until we can justly feel that we may claim rank with the elder and more experienced sister associations of our country. This, I hope, sir, you will not feel an improper, or presumptuous, ambitious aspiration, growing up where *sixty years* have scarcely elapsed since the *red man* of the *unbroken forest maintained undisputed dominion*.

The entrance to the hall was through a densely grouped forest of tall growing cedars, with other evergreens on either side, flanked and interspersed with a variety of flowering and lesser growing plants, at the terminus of which an *arch*, covered with various climbing plants, opened to the view the hall, sixty feet wide by one hundred and fifteen long, and twenty-five high, with its rich decorations. Directly in front of the entrance was a long table, six feet wide, stretching down the hall; the middle of which, lengthwise, was appropriated to various beautiful rural designs, stands of bouquets, &c., interspersed with pot plants. Among them, a moss cottage, with grounds laid off, with winding walks, planted with trees, shrubbery and flowering plants, and enclosed with an evergreen hedge, arranged by Miss Smith and Miss Allan,—reflecting some credit on their juvenile taste and ingenuity.

A beautiful moss harp, by Mrs. Wm. Resor; this was very tastefully decorated with a variety of flowers, and was much admired.

A beautiful miniature temple of moss, and a miniature flower stand of the same material, richly supplied with handsomely arranged bouquets, of appropriate size, by two young sons of S. S. Jackson.

A very large dish of almost every variety of the fruits of the season, with nuts, &c., tastefully arranged by Mr. Tulby, gardener to N. Longworth, Esq.

Two moss baskets, ingeniously arranged with flowers; one by Miss D. McWay, and the other by Miss E. Brooks.

The side appropriated to fruits, lesser bouquets, specimen flowers, &c., for much of its attractive richness, was indebted to Mrs. Wand, R. P. Re

SORR, Mrs. R. BUCHANAN, Mr. SAYERS and Mr. FERRE ,—for their fine collections of Roses, Dahlias, &c.; the whole forming a most beautiful display, rising from the sides to the centre.

Beyond the end of this table was situated the chaste and tasty *Floral Cottage*, by J. HOFFNER, Esq., which excited more general attention than any other object in the hall. It was a bower or temple, some six feet square, and eight or nine feet high, covered with a variety of running plants in full bloom, and otherwise decorated, and surrounded with marble statuary, vases, &c.; of the former, placed at each corner, representing the four seasons, of spring, summer, fall and winter, with two snow white lambs—one on either side of the entrance. The interior decorations consisted of seats, with a centre table, appropriated to bouquets, surrounding a glass globe with gold fish, which seemed to participate in the joyous occasion,—with a moss carpet, and two beautiful little Misses, dressed in white, whose office was to sell the bouquets to the admiring multitude. From the ceiling was suspended a plant of *Stanhopea tiquidra*, of the family of Orchids, in full bloom. This remarkable plant attracted much attention. Mr. HOFFNER is, I believe, the first who introduced and bloomed it in the west. For the ingenuity of this structure, Mr. HOFFNER and his gardener, Mr. Ross, deserve much credit. The vines were all grown and trained to it in his garden, and thus brought to the hall in a growing condition,—throwing out a continued succession of bloom.

Immediately in the rear of this, and covering the farther end of the hall, was appropriated to extensive groups of a great variety of valuable green-house plants, many of very large size and rare, mostly belonging to Mr. HOFFNER. These were so arranged as to raise one above the other, with walks between, which gave the groups a most imposing and interesting appearance. From these groups rose two columns, at equal distances from the sides of the hall, covered with running vines, and festooned from column to column, and so to the side walls, with wreaths of flowers and evergreens. This also extended along the centre of the hall, from chandelier to chandelier.

The entire extent of the hall, on either side, between the groups, was covered with tables five feet wide. That on the north, to various rural designs; among which was a large cornucopia, ingeniously prepared by the Misses ORANGE, pouring out its ample supply of everything pleasant to the eye and good for the taste. To plants, bouquets, specimen flowers, among which were splendid Dahlias, Roses, &c., mostly from Messrs. JACKSON, HEAVER and RESORR.

The table on the south was devoted to vegetables, plants, &c.; of the former, there were very fair specimens, though it is much to be regretted that so few of our vegetable gardeners seem to feel interested in these exhibitions. A much better display could and should have been made. The plants on this table, many of which were large and fine, were mostly from the garden of N. LONGWORTH, Esq.

The promenade, formed between the centre table and those on the sides, was partly occupied by rural structures. That on the south to a floral temple, by Mrs. HEAVER; this was a structure on a square base, six feet over, and eighteen feet high, with turrets on each corner of the main body, with one rising from the centre above the rest. The whole was covered with moss, and beautifully ornamented with various flowers. The interior arrangements were very chaste; the carpeting was mostly of Dahlias of various colours, tastefully arranged, and, when brilliantly lit up, produced a fine effect. The only objectionable feature was the rich papering of the walls; this should have been of a material more in harmony with the design of horticulture; although, however, it reflected much credit on the good taste and ingenuity of Mrs. HEAVER, which was fully awarded to her by the universal approbation of the visitors.

East of this structure, in the same promenade, was placed a most beautiful floral basket, some five feet over and four high, composed of native vines and flowers, with a splendid pyramidal bouquet of roses occupying the centre. This was most tastefully arranged by the inmates of the Scarlet Oaks, the residence of Dr. WARDER.

In the north promenade rose, in majestic style, a splendid Gothic monument, by S. S. JACKSON. This rested on a base five feet over, and rising some twenty-four, eight square, formed in regular divisions or offsets, one rising above the other, and terminating in a spire. This was also covered with moss, and tastefully decorated with various coloured Dahlias and other flowers, forming a most beautiful and well proportioned structure, which fully sustained the good taste for which Mr. JACKSON is noted in his floral arrangements; this his numerous admirers, as all others, did not fail to express on the occasion.

Beyond this, in the same range, stood a tasteful moss vase, four feet high, and two over, with a well proportioned bouquet, of many varieties of flowers, handsomely arranged, three feet high, resting in the same, by Mrs. D. McAVOY, of the Garden of Eden; to whose good taste and liberal supply of beautifully arranged bouquets and garlands, the hall was much indebted for its richness in that line.

It will not be expected that I should, in such an article, enumerate all the contributors, or those who otherwise extended valuable aid in the arrangement and decorations. For this, I must refer you to the official report; a copy of which I will send you as soon as published.

The supply of peaches was very limited, but the specimens were remarkably fine. Of pears and grapes, there were but few. Of apples, there was a better supply, but by no means so abundant or fine as on former occasions. The display of

fruit was, however, better than was expected, under the circumstances.

This exhibition, you will probably say, from the small supply of fruits and vegetables, should have been denominated a *Floral Festival*. To this, you have my hearty consent. And if you think my narrative of it of sufficient interest to your readers to secure it a place in your excellent magazine, I shall feel myself highly flattered. Very respectfully yours, *A. H. Ernst. Cincinnati, Spring Garden, Oct.* 5, 1849.

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Destruction of the Curculio.—This subject has received no inconsiderable share of the attention of your correspondents. While one party recommends a layer of manure from the barnyard, to be spread around the trees, another thinks his end attained by allowing the swinish family a roving commission in his plum orchard, and a third party considers paving the only grand panaceæ; a fourth supposes he has found the great desideratum in guano and iron filings. Still another, with a significant shake of the head, will tell you that, after having tasked his ingenuity to the utmost, he has given up the case as hopeless. Doubtless, every cultivator of the plum is greatly indebted to those who have been at the trouble and expense of these experiments; and had their success been equal to their zeal, the curculio by this time would have been numbered among the things that were.

Still, it would seem that the effects of these remedies are, at the best, temporary and uncertain; and something more permanently effectual is yet wanting.

What I particularly wish to notice at present is, that in making such experiments, it is necessary that they be of a nature, and conducted in a manner, as not to be prejudicial to the health of the tree.

In this respect, many of the methods tried and promulgated, are certainly objectionable; paving, for instance, cannot be looked upon in any other light, since practical cultivators are well aware that the mainspring of their success lies in having the soil in such a condition, that the ameliorating influence of the atmosphere may have free access to it. If the soil was merely a simple substance, supplying from its bulk the only food which plants require, it would perhaps be of little consequence how it was situated; but when we reflect that it chiefly acts as a laboratory, so to speak, where an essential part of their food is prepared, and that depending entirely upon the conditions in which it is placed, it is obvious that particular attention to this point is necessary. We know that by having the soil exposed to the atmosphere, the principal agents in the growth of plants are induced and promoted; by having it of an open texture, the roots are enabled to extend their spongioles and the water holding nutritive matters in solution, can convey them more equally and extensively to the roots; by frequently stirring up the surface, we admit a large amount of atmospheric air,—thus keeping up an ample and constant supply of those electro-chemical agencies on which the growth of plants mainly depend.

These, then, being the most favorable conditions in which the soil can be placed for the healthy existence of vegetation, it follows, that surface paving may be looked upon as opposed to successful cultivation.

With regard to the guano cure, the stimulating effects of this manure upon vegetation are sufficiently established; it is no less a fact that by its means, in many instances, insects are extirpated. Indeed, it is rather offensive to the olfactory organs of animals in general, and possibly the curculio tribe may have objections to its coming

"'Tween the wind and their nobility."

What part the iron filings play in the process, is not so apparent.

In applying the guano, it is recommended to "remove two or three inches of the surface soil;" at the same time, it must not "come in contact with the roots of the tree." Here the questions naturally arise,—what injurious effects are to be anticipated by the action of guano on the roots? Or, if injurious, how is it to be prevented? Guano is of easy solubility, and is quickly conveyed to the roots. Moreover, the roots are, or *should be*, within a few inches of the surface; so if harm was likely to accrue, removing the soil would only be the means of accelerating it.

The science of horticulture has attractions of the highest order; and, like other branches of science, a large amount of speculative knowledge concerning it may be derived by reading and studying horticultural and botanical works. In the entire absence of any practical experience on the subject, acute and philosophical views, bearing upon it, may be offered, and theories propounded, plausible enough as such, at the same time rather absurd when put in practice. Those individuals who have acquired a stock of information of this description, and can afford to indulge their taste in practical horticulture, are the most of all likely to commit mistakes. It has been said, that "a little learning is a dangerous thing;" and in this case, if not dangerous, it is frequently found to be a very expensive thing. Examples illustrative of this are numerous.

There is a very important point in the cultivation of the soil, which I am sorry to say is seldom resorted to. I mean that of turning it over in autumn, for the purpose of being pulverised by the winter frosts. I allude to this here, because it is also one of the most effectual means for the destruction of insects and their larvæ, apart from its highly beneficial effects on the soil. Turning and exposing the soil to the frost, will go much farther towards ridding it of destructive insects than is generally supposed. Indeed, when a thorough and systematic course of cultivation, based on sound principles, is fairly and fully followed up, there is little need to resort to expedients, which

are frequently employed as a means of counterbalancing defective and unsuitable management.

In conclusion, for the benefit of the purses of those who intend to try the paving system, I would suggest that instead of using bricks, a thin layer of concrete be employed for this purpose. This is easily procured; a mixture of lime, coal ashes, sand, or earth of any description—the lime not to exceed one-fifth of the whole—well worked to a mortar, and laid down about a couple of inches in thickness, will form as effectual a barrier to the progress of the curculio as any system of paving with bricks; and the expense of it is next to nothing. Before laying it down, the ground must be made smooth and level, and be in a medium state with regard to moisture. In this condition it will remain for a long time

When the curculio *season* is past, the concrete can be removed and applied as manure,—thus giving the roots the benefit of the atmosphere, to enable the tree to complete its growth, and form healthy, well ripened wood for a future crop.

A friend suggests the use of tin or zinc, instead of paving, fitting it closely round the stem of the tree, and extending it as far as necessary. I think the suggestion is good; as it could be removed when found to be no longer useful, and replaced when again requisite. If painted of a colour to harmonise with the soil or grass on which it may be placed, it would last for many years. *Wm. Saunders. New-Haven, Oct.* 16, 1849.

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Western Fruits.—Among the numerous notices of fine peaches in every section of the west, as well as in the columns of your valuable journal, I have sought in vain for mention of a splendid freestone peach, of high reputation about thirty years ago; I mean the Madeira Freestone. It is twenty-five years since I have seen the fruit; but from my recollection of it, there is nothing equal to it among those now in high repute. It was of very large size, very round and perfect in shape. Colour—a beautiful combination of yellow and red. Pulp—remarkably firm, but not tough, and of a delicate yellow tinge. Flavor—rich sub-acid, and highly scented. Stone—very small and smooth, separating very freely from the pulp. It was grown in Muskingum county, Ohio, side by side with the New-York Rareripe, Old Mixon, Red Cheek Malacoton, and various other of the finest kinds from Long-Island, and, as well as I now recollect, ripened later than any of those mentioned; but was greatly preferred to all others. If, in the long period mentioned, it has lost its old name, but still exists as rich and fragrant, under some other name, I should like much to be introduced to it under its new title; as I wish to renew my acquaintance.

The present season has been a very cold and backward one; but fruit generally, and the peach especially, has been very abundant—near St. Louis and Alton—of large size and fine flavor; but in this section, it is at least two weeks later than usual, and rather too acid, especially all the earlier sorts. Yet, generally, with proper selections and culture, the peach succeeds well here, especially near the high banks of the Mississippi, along the lower rapids where it is seldom wholly destroyed by frosts. On the prairies, remote from the river, it is more uncertain. The wild plum grows in every thicket in this country, and this year has borne most abundantly; and although usually a small, poor, and too acid fruit, yet occasionally I have met with those that would compare favorably with the finest cultivated plum. I found a tree this year, growing in a garden where it had been allowed to stand when the garden was enclosed; the fruit was large, of a bright red and yellow; thin, tender skin, with sweet pulp; stone large, and inclined to adhere to the pulp; very fragrant when ripe,—so much so, as to scent the garden in which it grows. The tree has a free, open, thrifty head, and is represented to be a prolific bearer. I regard it as quite equal to anything of the plum kind that I have seen, and intend to propagate from it in the spring; but I fear the curculio will be fatal to it when brought into the vicinity of the domestic plum.

If you can give me information, through your journal, respecting the peach I have described, I shall be much gratified. Respectfully your ob't servant, *J. B. Mathews. Warsaw, Illinois, September* 22, 1849.

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English Parks.—Your criticising correspondent, at p. 145 of the Horticulturist for September, speaks of the parks of the English gentry as if they were so many pieces of waste land, useless for all purposes except mere ostentation and display. Now, with all due respect for your excellent correspondent, I must say that his prejudice has to all appearance, got the better of his knowledge. In short, he misrepresents Mr. Colman's excellent work in depicting the English as they are, and manifests total ignorance of what he is writing about. It is a notorious fact, that the private parks of the gentry are more fertile, and doubly more productive than any equal surface of land in the whole island. Productive of what? Of human food—and human labor, independent of the grandeur and beauty they give to the landscape. Where is the farm or field in the kingdom that produces an equal amount of these two grand requisites of society, 'food and labor,' as these private parks? I ask "Jeffrys" to point out any park in that kingdom, including trees and all—those monuments of time, coeval with the growth of centuries, that is not twice as productive as any other portion of the owner's estate. Look for instance, at Windsor Park, embracing a surface of many square miles, and where stands, perhaps, the finest avenue of trees in the world; a lover of landscape beauty would not grudge to cross the Atlantic to look at it. Now, according to the phraseology of "Jeffrys," one would suppose this beautiful park just so much waste

land—a perfect sacrifice to royal extravagance and ostentation. Yet of all that fertile park at Windsor castle, which feeds double the quantity of stock of any park, arable or otherwise, that I have seen in *New* or *Old* England, there is but a single acre or so, appropriated to a terrace flower-garden opposite the private apartments of the Royal family. There you may see the cattle browsing close to the castle gates. And there you may see the Queen and her husband walking among them with far less peevish delicacy or false refinement, than most of the American ladies would do. Even the pleasure parks of London produce their quantum of human food in the shape of beef and mutton, since they are all kept short by the grazing of sheep or cows. The English gentry know the use of money, and the *want* of it too well to allow their parks to be unproductive for mere ostentation and display.

The people of England are proud, and justly too, of their parks. They are the distinguishing features of an English landscape, and present to the lover of nature a combination of utility and beauty which no other country in the world can supply, and which the ablest writers and men of taste have been laboring for years past to introduce into this country. Contrast one of these old country mansions with those cited in the editor's excellent leading article of the September Horticulturist—place them in juxtaposition, and I ask—which would you imitate and which condemn? I repeat that these parks, so disparaged by your correspondent, are the glory of the country; and barbarous indeed would be the taste that could ruthlessly destroy them.

A critic should be *just* as well as generous; but especially ought he to be impartial and unprejudiced. Some people cannot write the name of England without spitting fire at it. But were the sentiments consistent, the language might be excused.

As I have ventured to quiz, probably some great incog—I hope he will receive my remarks in the friendly spirit in which I write them, and thank me for my candor. *R. B. Leuchars. New Haven, Ct., Sept.*, 1849.

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Planting Dwarf Pears.—*Dear Sir:* In planting out dwarf pear trees—where there is much length of stock between the fibrous roots and the graft, I have often been perplexed to decide how deep to plant it. Mr. Rivers' advice relieved me, and his plan at first seemed very judicious. But I have been in doubt since, whether it was desirable to proceed on that plan in *this country*, lest the tree should suffer from drouth. What do you think? The roots are encouraged to spread only on the surface; or, in fact, in a mound above the surface. The lower roots are *discouraged*. The upper roots have a highly manured soil, which it seems to me would be particularly trying to them in July.

Well, if its objectionable, what plan shall we use? Put it down in all cases—the graft to the surface? Then, shall we encourage surface roots—as all the English and French writers advise? or shall we get depth of soil—and manure high *and* low—*or* which? Yours truly, *Smock. Hartford, Ct., Sept.* 11, 1849.

[Make your soil *deep* and rich, and the roots will take care of themselves. Ed]

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Paving Plum Trees.—*Mr. Downing:* Paving about plum trees to thwart the curculio, always appeared to me to be the sheerest nonsense. Whether they fly or not, its value is precisely the same. It presents no obstacle to wings; and certainly much facilitates progress on legs. Why wont gentlemen who are so fond of recommending it, try the same experiment with their cherry trees, to keep off the birds; or build bridges over their garden fences, to prevent the inroads of unruly boys; and enrich us with the record of their sagacity? If the curculio passes up the body of the tree, as is claimed to be "conceded," why not invest funds to the extent of a cent per tree in tar? A sum not so exorbitant but most plum-growers might be tempted to risk it; and the expedient would certainly be more embarrassing to footsteps than brick pavement. The true worth of a recommendation for the preservation of fruit, in addition to being effectual, is its capability of universal application. Paving, at $3 per tree, is as generally impracticable, and would be as rarely adopted, as enclosing trees in glass houses. Its expensiveness and doubtful utility, at best, condemn it.

There is nothing known of the nature of the curculio opposed to the probability that, having wings, they fly, if necessary, to perpetuate their race; nor of the grub, that, having legs, they also have wit enough to convey themselves, after escaping from the fallen fruit, from where they can't burrow to where they can, though in passing over pavements they sometimes doubtless perish, like bigger worms over the deserts of Sahara. The sagacity of the curculio provides against this difficulty, where it is possible, by the selection of localities more favorable to the prosperity of the rising generation. *Hence, paved trees are shunned where others can be found.* Let all be paved, and all would suffer. I venture to predict that, unless Mr. Spalding, of Lockport, has near neighbors, whose plum trees are not paved, every one of his own will hereafter be attacked. By cultivating two sets—one for himself, and another for the curculio—he has hitherto preserved his share; but by paving the whole, I am mistaken if he will not be the loser. Paving, on such terms, may by some be considered advisable; but I don't apprehend a scarcity of brick will grow out of it. *J. C. H. Syracuse, September* 18, 1849.

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Pear Blight in Times Past.—*Dear Sir:* I think your correspondent, in the September number, is wrong in attributing pear blight, &c., to modern improvements. Some 25 years ago, be-

fore railways or electric telegraphs were dreamed of, the blight prevailed so severely in this region that scarcely a bearing pear tree was left. One of our amateur cultivators was so discouraged, that to this day he says it is of no use to plant pear trees; the blight will kill them. Others, who had more faith, have planted pear trees, and have had fine crops of fruit to this day. The worst blight we have had this season, has been produced by the drouth in April and May, and again in the summer. In April, I planted carefully about 400 pear trees of my own raising; and perhaps 50 of them may survive the severe trial they have had.

In usual seasons, I should not have lost more than three or four per cent. One of our nurserymen has been very successful in raising pear stocks from seed, on a strong clay soil, in the following manner: Last November he made the ground very rich with rotted manure, then planted the seed in shallow drills, which he covered lightly with sand. This spring, they generally grew, and many are now nearly three feet high. Yours truly, *Charles H. Tomlinson. Schenectady, September* 12, 1849.

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Raising Chance Seedlings.—It may be interesting to those who depend upon raising fine fruit from sowing the stone or kernel, to know what proportion the experience of others has proved that the good will bear to the bad or indifferent. Some years ago, I sowed about two barrels of peach pits, from which were produced upwards of 3500 plants. Of these, perhaps 800 were inoculated, and the remainder suffered to grow up and bear fruit. This they all did, I may say, without exception, during the last season. The great majority of the peaches were white—many with a strong purplish tinge; but few were yellow, and amongst the whole of these seedlings, I found but a *single* peach that was at all worth attention. If, in another year, it improves in quality, I may propagate from it, as it is a large, green, and very late fruit. *J. W. K.*

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New-Bedford Hort. Society.—This energetic society, we perceive, had a very successful exhibition on the 27th and 28th of September. The show of pears was very fine,—Mr. Crapo showing 44 varieties, Mr. Arnold 28 varieties, and Mrs. Morgan 20 varieties. We extract the following from the report of Henry H. Crapo, chairman of the committee on fruits:

"They have much pleasure, in the outset of their report, in being able to state, that the display of fruits on the occasion was exellent, and far exceeded their most sanguine expectations.

"The show of pears, the standard fruit of New-Bedford, both in appearance and extent, as well as in size and beauty, exceeded that of any former exhibition, and gave ample evidence that our soil and climate are well adapted to the successful growth of this most luscious and valuable fruit. Some of the dishes were indeed splendid, and the committee very much doubt if they have often been excelled by any exhibition. A very large dish of the Frederick de Wurtemberg, from Mrs. Hannah Bates, the specimens of which were very large and handsome; and also a large dish of the White Doyenne, from Wm. T. Cook, of great size and exceeding fairness and beauty, especially merit this commendation. Dishes of the Flemish Beauty, from J. H. Clifford—of the Beurre Diel, Vicar of Winkfield and Glout Morceau, from Joseph Clarke—of the Passe Colmar, from Wm. Swift—of the Bartlett, Glout Morceau, Beurre Bosc and Seckel, from Jas. Arnold—of the Louise Bonne de Jersey and Napoleon, from Henry H. Crapo—of the Seckel, from Wm. T. Russell—of the Glout Morceau, from John M. Howland, of Fairhaven—of the Duchess de Angouleme, from Henry Deane—of the Seckel, from Wm. Rotch, Jr.—of the Bartlett, from Dennis Wood—of the Duchess de Angouleme, from Joshua Richmond—of the Wilbur, from E. Gardner—of the Napoleon, from Wm. Rotch, and of the Capsheaf, from John Akin, merit especial notice for the great size and fine handsome appearance of the specimens, even where all were fine.

"Of apples, the show was limited, the season having been very unfavorable to their growth. The committee would here express the hope that the culture of this truly valuable fruit may be revived in our vicinity, and again flourish as in former years—believing as they do that all which is essential to success in this department of fruit culture, is merely for the zealous and devoted pomologist to take the matter seriously in hand. There were however some very fine specimens and worthy of special notice, among which were several varieties from Wm. Almys, of Dartmouth; a striped apple, very large and handsome, from Levi Jenney, Jr., of Fairhaven; and Hubbardston Nonsuch, and another variety without a name, from Samuel G. Hudson.

"The show of peaches and plums was also limited, although some very fine specimens of each were upon the tables. Some noble specimens of the quince were also conspicuous, and especially three dishes of the Orange quince, from Charles P. Sherman, the largest specimen of which weighed 18 ounces.

"Of grapes the show was very fair, both from the grapery and from open culture, and made a fine appearance, interspersed as they were among the other fruit, throughout the entire length of the tables. Of the Isabella, those exhibited by Henry Cannon were very large, both clusters and berries, and would perhaps be regarded as the best exhibited. Those from A. D. Richmond were also very fine, and, setting aside size, were perhaps fully equal to those exhibited by Mr. Cannon. Other dishes of this excellent variety of the grape, worthy of special notice, were from R. N. Swift, of Fairhaven—Charles W. Morgan, and R. R. Crocker."

Budding Roses.—*Dear Sir:* On a recent visit to Newark, N. J., I was much gratified with a fine display of the Prince Albert Rose, growing on a strong climbing rose ten feet from the ground. The buds were inserted in the fall of 1847; these, the next season, formed vigorous shoots, and some flowers. In the spring of '49, they were shortened back, having stood the severe winter without protection; and at this time, they are a perfect show, having from fifteen to twenty finely formed flower buds on each.

Such climbing roses as the Boursault, may be made to bloom perpetually by inserting a number of buds of the China Roses; and when the different varieties are in bloom at the same time, they have a fine appearance. Some of the finest flowers of the Souvenir de Malmaison I ever saw were produced in this way; but they, unfortunately, will not stand the winter.

I have also practiced this method for propagating the finer Tea and Bourbon Roses, also perpetuals, for dwarf plants, by inserting a bud about an inch above the joint of the Boursault shoot, or any other smooth wooded variety that will strike freely; and in about ten days, or immediately after the bud has taken, cut off the shoot at the joint, and strike in the usual manner. Very respectfully yours, &c., *Geo. Kidd. Red Hook, Dutchess county, N. Y., Oct.* 12, 1849.

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Wintering Plants in Cellars.—In your December number of last vol., in answer to a correspondent, (W. R., of Milwaukie,) you mention Oranges, Lemons, Pomegranates, and Hydrangeas, as exotics, which may be preserved during winter in a cellar. Allow me to add to the number, by suggesting the following varieties roses and bulbs in pots: Rubus rosafolias, Lagerstroemia, Erythrina, Oleanders, Olea fragrans, Magnolia fuscata, and other species, Figs, Laurus nobilis (the Bay,) Yucca gloriosa, Hibiscus sinensis, half hardy Rhododendrons, Chinese Azaleas, Geraniums, (the roots taken out of the pots,) wall flowers, stocks, Fuchsias, &c. &c. *J. W. K.*

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The Curculio.—A correspondent of yours, for a single year, tried paving to save his plums from the curculio, and failed; and therefore concludes paving is not a preventive. He is confirmed in this opinion, because "the insect has wings; and presumes, as the pavement insured a crop with Mr. Allen, that his plums belonged to the Dutch family." It appears to me singular, that persons will, from a single year's experience, undertake to express an opinion. I have for 22 years had about 20 plum trees surrounded by a brick pavement, and have never failed to have a crop of fruit from them. A few of the fruit, in some varieties, are occasionally stung by the curculio. In my adjoining grounds, I have as many trees of the same varieties; and 2 years out of the 25, have had a fair crop of fruit. The other 23 years the curculio left not a single plum. The safety of the fruit in a pavement does not arise from no curculio being bred in the ground. If a person does not raise them, his neighbors will give him a liberal supply. As an experiment, I planted a small plum tree, 1000 feet from any plum tree. The first year of its bearing, every plum was stung by the curculio, and for years after. The safety of a pavement arises from the instinct of the insect. It will rarely deposit its egg over a pavement; as the young, when they fall from the tree, cannot secure winter quarters in the earth. The mother feels too strong an interest in her children to subject them to such a fate. *N. Longworth. Cincinnati, Ohio, September*, 1849.

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Feeding Insectivorous Birds.—I find the following in Liegel's Introduction to his work on German Fruits:

"Birds, particularly Starlings and Wrens, are the most effectual insect destroyers. Many fruit-growers set up boxes and other convenient receptacles for them to build in. In order to induce them to make their homes in our gardens, and not to forsake us in winter, we have practiced feeding the wrens throughout the year, but more especially during inclement seasons, with hemp seed, or with sunflower seed, of which they are remarkably fond; and we make a further provision, by hanging up for them on a wire, pieces of *pork, or the fat of boiled meat.*" Yours, *J. W. Knevels. Fishkill Landing, N. Y.*

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Verbenas out of Doors.—I have always been in the habit of keeping my *Verbenas* in the house; but they were very apt to die, and if they did not they were very unsightly objects all winter. Last fall a friend told me if I would take them up, and put them in a hot-bed frame, that they would live very well. But I thought I would try if I could not do it without taking them up; so I just took an old frame and set it over a fine scarlet one, and took up the rest and planted them in the same frame. I did not even bank the earth up round it; and in the spring the scarlet one looked beautiful; but out of all those I took up, only one or two lived. If it is worth mentioning in the Horticulturist, it is quite at your service. *A Constant Reader. Washington, D. C.*

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Supports for Climbing Plants.—I have used for two years past, supports for delicate climbing plants, which I have found so convenient that I presume many of your readers, to whom they may be new, would be glad to adopt the same plan. I believe the idea originated with Robert Speir, Esq., of West Milton. There is, first, a short post, firmly placed in the earth, rising about eighteen inches above the surface; to this, the posts supporting arches, trellises, or frames, are secured by two stout wooden pins, passing through auger holes bored in both. If the trellis be covered by any tender vine, in the fall, let the upper pin be pulled out, and the post will turn on the

other pin as a hinge, and be laid down without disturbing the vine, and safely covered up until spring.

I have tried several remedies for the curculio without success, until this spring, when I laid sheets under the trees, and jarred the trees, as recommended in your pages, and killed all that fell on the sheets. I repeated this three times about the time the blossoms were falling, and have, for the first time for many years, an abundant crop of plums. *M. S. T. Rose Hill, Saratoga county.*

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ANSWERS TO CORRESPONDENTS.

Preserving Grapes.—*A. B.*, (New-London, Ct.) Your grapes should be packed in small boxes, or baskets, holding a little more than half a peck each—between layers of cotton *wadding*, (not batting.) Keep them in a cool garret, or dry cellar, where the frost will not penetrate.

Transplanting.—*W.*, (Trenton, N. J.) Your failure in transplanting is unquestionably owing to your allowing the trees to remain with the heads entire. In a dry summer, trees so planted will almost always fail; when others, the limbs of which are shortened back pretty severely on planting, succeeded perfectly.

Insects.—*W. Anderson*, (New-York.) The soil of your garden has become filled with insects. Dig it deeply, and throw it up into ridges at the approach of winter; and if there occurs a mild interval during winter, break it up and re-ridge it. The frost will destroy the eggs and larva of a large part of the insects. Early in the spring, to complete the matter, give the whole a broadcast dressing of salt, at the rate of six bushels to the acre. This will effectually destroy the "cutworm," and all the other pests you complain of.

Peach Trees.—*T. Jones*, (New-York.) You will never succeed in getting a healthy stock of peaches until you take the trouble to procure peach trees from the western part of this state, or some other district where the *yellows* is unknown. Trees raised from stones gathered about the markets in New-York, must necessarily produce a large proportion of diseased seedlings; and, if budded, the sort worked upon such stocks will partake of the constitutional taint.

Herbaceous Plants.—*An Inquirer*, (Bangor, Me.) When the roots have stood for a long time in the same place, the soil becomes exhausted, so that the growth is feeble and the flowers are poor. The remedy is either to change the roots to a new border, or to take them up and renew the border by trenching and manuring, or by bringing in some new soil. The roots should also be divided when they have formed large branches. Pæonies should be removed in the autumn, or *very* early in the spring. All herbaceous plants may be put out with success in the autumn, especially if the buds of the more tender ones are covered with a few inches of leaves, or litter, till spring opens.

List of Fruits.—*A Young Planter*, (Columbus, O.) The following are the best varieties for your purposes: *Apples*—Baldwin, Northern Spy, Porter, Belmont, Fall Pippin, Newtown Pippin, Ladies' Sweeting, Melon. *Pears*—Gray Doyenné, Seckel, Paradise d'Automne, Dearborn's Seedling, Bartlett, Rostiezer, Beurre d'Aremberg. *Cherries*—Mayduke, Elton, Black Eagle, Black Tartarian, Downer's Late, Belle Magnifique. *Plums*—Green Gage, Jefferson, Smith's Orleans, Purple Favorite, Frost Gage, Coe's Late Red.

Grape-Vines.—*A Connecticut Subscriber*. Eyes, planted in pots, will succeed well in either mode. Many persons think cuttings, made in this way, do best when halved, because there is more surface from which new roots are emitted.

Persian Melons.—*Ibid*. Repeated trials have proved that these melons are too delicate in this climate for out-of-door culture; and the flavor is not so much finer than the well known "Citron melon," that many growers will attempt a culture, requiring so much care. It is extremely difficult to get genuine Ispahan melon seed, even in England; three-fourths of those received under this name, prove a worthless yellow cantelope.

Market fruits. *A Young Orchardist*, (New Bedford.) Plant Baldwin and Roxbury Russets for profit in your soil and climate. Probably the Lombard is the most suitable plum. Lime will not answer to reduce peat—but lime slaked with brine will. See the leader in this number.

Pears. *Z. Q.*, (Binghamton, N. Y.) From your description we think your pear is the Passe Colmar. In order to get good specimens of this variety, you must thin out the crop of fruit early in the season, and not allow any second crop to form, as it often does.

Books. *A Subscriber*, (Roxbury, Mass.) The *coloured* edition of our Fruits and Fruit Trees will be ready in a few days; the "Country Houses," has been extended beyond our original plan, and will still require a few weeks longer before it is out of press. We have no connection with any nursery or commercial garden whatever.

Green houses. *C. L.*, (Fayetteville, N. C.) Green-house plants would do well in the house all summer with you, if the house were *shaded* by nets, or the glass clouded by a thin coat of whiting on the under side. Plants never do *well* under the shade of trees in summer.

Composts. *D. D. J.*, (Hamden, Ct.) We assume 30 bushels to the wagon load. Leached ashes are twice as strong as unleached, and therefore double the quantity should be used. Bone dust would improve this compost, and should be added at the rate of one bushel to the wagon load. Use a barrowful of this compost to each hole six feet wide and three feet deep. If the subsoil is a hard pan which holds water, you may fill up 4 or 5 inches of the bottom with small stones.

*** Several notices of new fruits, and domestic notices, intended for this number, are unavoidably postponed to the next.

MASSACHUSETTS HORTICULTURAL SOCIETY.

BUSINESS MEETINGS.

Sept. 22, 1849.—President SAMUEL WALKER in the chair.

Voted, That the sum of $25 be paid by the treasurer to Mr. David Haggerston, for the services rendered by him during the annual exhibition.

Voted, That a committee of three be appointed by the chair, to nominate a list of officers, professors and committees for the coming year, and report at the next meeting.

Messrs. Josiah Lovett, 2d., David Haggerston and E. M. Richards were appointed that committee.

Complaint having been made by members and others, contributors to the annual exhibition, of the loss of their contributions, it was

Voted, That a committee of three be appointed by the chair, to take into consideration what means can be adopted to prevent the occurrence of like loss for the future; and Messrs. Joseph Breck, David Haggerston and R. M. Copeland were appointed said committee.

The President, in behalf of the executive committee, applied for the loan of the dishes, phials, &c., of the society, for the use of the Norfolk Agricultural Society, at their annual show; and it was

Voted, That the society loan to the Norfolk Agricultural Society such of their glass ware as they may wish, to use at their exhibition,—said society paying all the expense of transportation, labor, breakage, &c. &c.

Sept. 29.—President SAMUEL WALKER in the chair.

The committee appointed at the last meeting to nominate a list of officers, professors and committees, for the coming year, submitted a printed list, which was recommitted to the same committee, with instructions to make such alterations as were rendered necessary by the declining of nominees.

The committee appointed to take into consideration the adoption of means to prevent the loss of contributions to the exhibitions of the society, submitted the following report:

The committee appointed to investigate the subject of purloining fruit and vegetables from the hall of the society, at the close of the last exhibition, report that they have made diligent inquiry, but have not received information sufficient to substantiate a charge against any person. The committee consider the offence one of the most aggravated and disgraceful character, and recommend that, for the future, if any member of the society be detected in an act so mean and contemptible, that he be EXPELLED from the society. Or if it be any one in the employ of the society, that he be forthwith discharged from that service.

The committee recommend that, on future occasions, a committee of three be chosen, whose duty it shall be to be present during the clearing of the hall, and attend to the delivery of fruits, vegetables, &c., and in no case to deliver to any other person than the contributor, without a written order. JOSEPH BRECK, Chairman.

Voted, That the report of the committee be accepted, and placed upon the records of the society.

Mr. C. M. HOVEY, as chairman of the committee appointed to prepare and present to Hon. H. A. S. DEARBORN the first president of the society, the Society's Gold Medal, as a mark of esteem for the essential services he rendered to the science of horticulture, and the interest of the society, during the period he presided over its affairs, reported that they had attended to the duty assigned them, and submitted the following correspondence:

Boston, Sept 27, 1849.

HON. H. A. S. DEARBORN—*Dear Sir:* Agreeably to a vote of the Massachusetts Horticultural Society, passed at the annual meeting, Jan 9th, 1849, a copy of which is enclosed, we now, in accordance with that vote, have the pleasure of presenting you with the Society's Gold Medal.

Many years have passed away since you presided at the head of our association; when your zeal in the cause of horticultural science—your untiring exertions to render popular the pleasing pursuit, to which it is essentially devoted—your arduous labors while guiding its affairs in the infancy of its organization, and your extensive correspondence with gentlemen of science in every country and clime, gave the society a standing and position, which has since caused it to be looked upon as the parent association of our country.

As a small but not the less earnest tribute for your labors, as the first president of the society, at a period when, in addition to horticultural affairs, that noble monument of your devotion to its interests—Mt. Auburn Cemetery—was projected, we now present you with the Society's Gold Medal, and beg your acceptance of the same.

With the assurance of our best wishes for your health and prosperity, we have the honor, &c., Respectfully yours,

C. M. HOVEY,
CHEEVER NEWHALL,
E. M. RICHARDS,
} Committee.

Hawthorn Cottage, Roxbury, Sept. 28, 1849.

GENTLEMEN—This afternoon I received, with great pleasure, your very kind letter, and the beautiful gold medal, which the Massachusetts Horticultural Society has so generously conferred upon me; and I request that you will do me the favor of presenting my grateful acknowledgments to the members of that important institution for the honor they have done me. I deeply regret, however, that my humble efforts to promote one of the most interesting branches of rural industry, have not been more worthy of such distinguished consideration, and so precious a reward.

For the very favorable manner in which you have been pleased to estimate the very limited service I have attempted to render my fellow citizens, who are interested in the various departments of useful and ornamental cultivation, I offer my sincere thanks.

With the most ardent aspirations for the prosperity of the society, and your individual happiness,

I have the honor, gentlemen, of being
Your much obliged and obedient serv't,
H. A. S. DEARBORN.

October 6.—The annual election of the Massachusetts Horticultural Society, for the choice of officers, professors and committees for the coming year, took place at their library rooms, School-street, Oct. 6th. Vice-President CHEEVER NEWHALL in the chair.

Voted, That the polls be kept open 30 minutes, for the election.

The chair appointed Josiah Newhall and A. D. Williams, jr., a committee to assort, count, and report the number of votes given, who reported the following list as unanimously elected:

President—SAMUEL WALKER.

Vice-Presidents—BENJAMIN V. FRENCH, CHEEVER NEWHALL, EDWARD M. RICHARDS, JOSEPH S. CABOT.

Treasurer—WILLIAM R. AUSTIN.

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Committee for establishing Premiums—Chairmen of the Committees on Fruits, Flowers and Vegetables, Josiah Lovett and P. B. Hovey.

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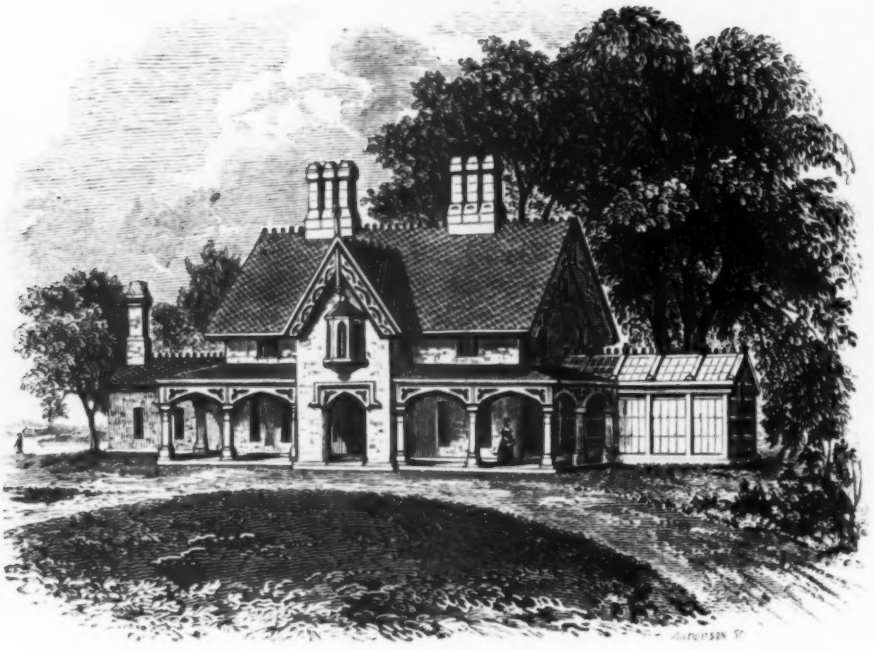
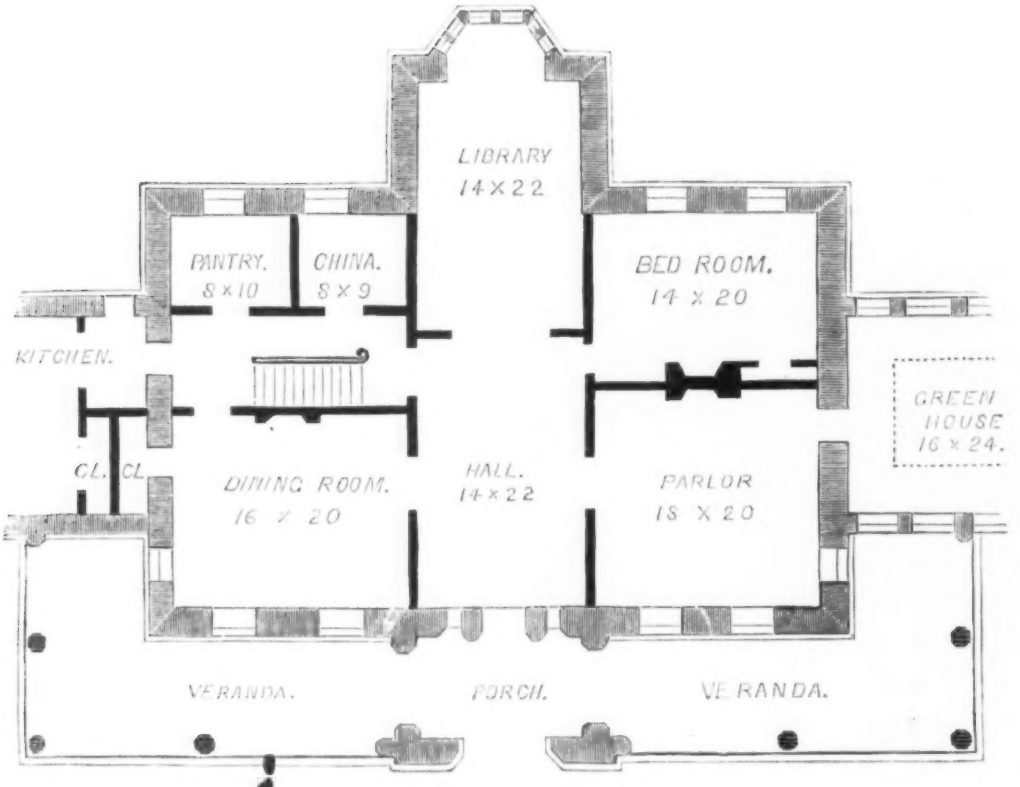
Daniel Denny, of Boston, was elected a member of the society. EDWARD C. R. WALKER, Rec. Sec'y.



DESIGN FOR A COUNTRY HOUSE



PRINCIPAL FLOOR.